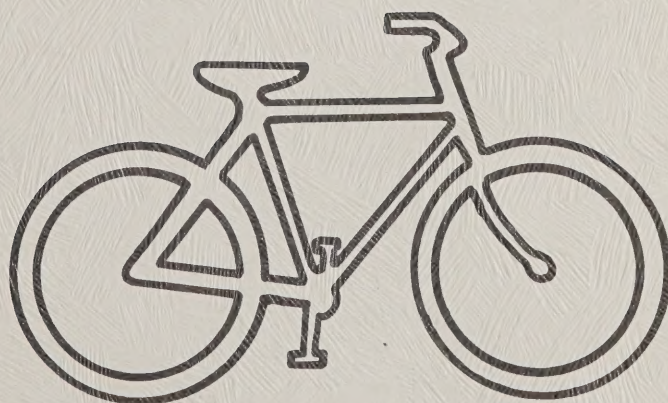


LA 24N
DT 115
-77225



Government
Publications

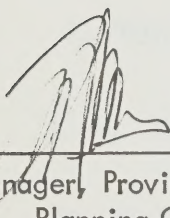
REVIEW OF
THE
MINISTRY'S
POLICY
REGARDING
BICYCLING
AND
BICYCLING
FACILITIES



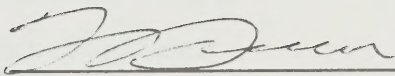
Ministry of
Transportation and
Communications

CA20N
DT 115
-77R25

REVIEW OF THE MINISTRY'S POLICY REGARDING BICYCLING AND BICYCLING FACILITIES



Manager, Provincial Roads
Planning Office



Director, Municipal/Provincial
Transportation Branch

PROVINCIAL ROADS PLANNING OFFICE 1977

J. Tanner
Project Planner



Digitized by the Internet Archive
in 2024 with funding from
University of Toronto

<https://archive.org/details/31761118924059>

Team Members:

C.J. Meyers, Senior Project Planner
Provincial Roads Planning Office

J. Tanner, Project Planner
Provincial Roads Planning Office

G.K. Hunter, Special Assignment Engineer
Systems Design Branch

R. Ballantine, Transportation Planner
Municipal Planning Office

P. Ginn Traffic Analysis Engineer
Traffic Control Office

M. Nagel, Program Officer
Program Development Branch

D. Cowan, Information Officer
Public Safety and Information Branch.

CONTENTS

	<u>Page No.</u>
Problem	1
Study Objectives	1
The Ministry's Current Policy.....	2
Background Information	5
Review of Current Policy-Analysis	
I Construction and Funding	7
Figure 1 - Bicycle sales in Canada	8
Conclusion Re: Construction and Funding	13
II Bicycle Registration	14
Conclusion Re: Bicycle Registration.....	16
III Safety Education	17
Conclusion Re: Safety Education	18
IV Legislation	19
Conclusion Re: Legislation	20
Recommendations	21
Memorandum PD-77-02.....	23
Appendix I - Accidents	
Accident Analysis A	26
Figure 2 - Cyclist Casualties	28
Figure 3 - Cyclist Injuries and Fatalities	29
Figure 4 - Cyclist Injuries by Age Groups.....	30
Figure 5 - Cyclist Fatalities by Age Groups.....	31
Figure 6 - Injuries and Fatalities on all Ontario roads...	32
Accident Analysis B	33
Introduction.....	33
Data Collection and Analysis.....	35
Summary and Conclusions	40
Table I, II, III, and IV.....	42-45
Figure 7 and 8	46-47
Appendix II - Legislation	

Contents (Cont'd)

	<u>Page No.</u>
Legislation in Ontario	48
The Highway Traffic Act	48
The Public Transportation and Highway Improvement Act	53
The Municipal Act	55
Legislative Changes Proposed by Municipalities	56
Bicycle Route Signs	61-62
Appendix III	
Letter to File Re: Meeting on December 5, 1975	63
Enquiry to other Provinces and States	65
Summary of the Response to the Enquiry from other Provinces	67
Summary of the Response to the Enquiry from USA	70
Covering letter to the Municipal Questionnaire.....	74
Questionnaire	56-83
Summary of the Response to the Questionnaire	84-90

PROBLEM

Resolutions have been presented to the Ministry by municipalities and interested groups requesting legislation changes regarding bicycles and bicycling, subsidies for bicycle facilities and Provincial registration or licensing of bicycles. The growth of cycling as well as rise in bicycle-motor vehicle accidents have been referred as justification.

At a meeting on December 5, 1975, between the Deputy Minister, Senior members of the Ministry, elected and technical municipal representatives and industrial representatives, a decision was made by the Deputy Minister, Mr. H. F. Gilbert, to review the Ministry's position with respect to bicycling to ensure that the existing policy represents current values and needs. (See memo to file in Appendix III).

STUDY OBJECTIVES

The study objective was to review the Ministry's current position (policy) regarding bicycling and bicycling facilities and make recommendations on possible changes.

In order to assess the opportunities of changing the Ministry's policy, four areas of interest were identified:

- I Construction and Funding
- II Bicycle Registration
- III Bicycle Safety Education
- IV Legislation

In the following analysis and recommendations, each of the above subjects are dealt with separately.

Factors which were deemed to have an influence on change to the Ministry's existing policy are: trends, public demand, accidents (conflict with motor vehicles) and theft.

THE MINISTRY'S CURRENT POLICY WITH RESPECT TO BICYCLING

In response to the increase in the number of bicyclists and miles travelled by them in 1971 to 1973 in Ontario and the resulting rise in accidents in which bicycles were involved, the Ministry prepared a policy position with respect to bicycling in 1974.

The following is a summary of the findings of that study and the Ministry's current policy.

Construction and Funding

The Ministry recognizes bicycling as a significant form of recreation, but its viability as a regular transportation mode is severely limited by its sensitivity to weather and the seasons. The potential usage of long distance bicycle facilities is quite low. For the above reasons, the Ministry does not consider the provision of special bicycling facilities to be the responsibility of road jurisdictions and makes no special provision of any kind for cycling on Provincial highways.

Expenditures for such facilities are not eligible for municipal road subsidy. Recognizing that most bicycling is done in urban areas, the Ministry allows the inclusion of bikeway planning as a sharable cost in urban transportation planning studies.

Indirectly the Ministry subsidizes bicycle facilities as existing legislation allows designating portions of a highway (which have been constructed under cost sharing) for the exclusive use of cyclists. Also, "Bicycle Route" sign (Rb-69) and "Bicycle Prohibition" sign (Rb-67) as shown in the new edition of the Manual of Uniform Traffic Control Devices of Ontario, are approved signs by the Ministry and are eligible for road subsidy, provided the signs are erected along municipal roadways. (See Appendix II).

Registration and Licensing

The Ministry does not license cyclists or register bicycles.

Safety Education

The Ministry is committed to education programs. The primary concern of the Ministry is the safety of all road users, therefore the Ministry has reinforced its safety programs, particularly through education of both cyclists and motorists.

Legislation

The Ministry does regulate: bicycles at time of operation - lighting, reflectors, etc., method of operation - rules of the road.

The Ministry does not regulate: bicycles at point of sale, operators' age or fitness.

Cycling is permitted on public highways, except: by Regulation, on all CAH, but in practice only on freeways and on municipal roads with speed limits of 50 mph or more, where a by-law is enacted.

BACKGROUND INFORMATION

The major source of input:

Bicycle sales - Statistics Canada and CCM

Accidents - Driver Branch

Provincial and State Enquiry - was sent to other

Provinces and to every state in USA (See Appendix III)

Comprehensive Questionnaire - was sent to 119 municipalities,
in Ontario, with a population of 5000 and over (See Appendix III).

Definitions

Definitions generally accepted that categorize the various types of
bicycle facilities are:

Bicycle Facility - any kind of facility used by cyclists, such as a
roadway, rest area, parking or storage area.

Bicycle Path - an independent path within existing right-of-way or
within independent right-of-way.

Bicycle Lane - a separate track adjacent to roadway or adjacent to sidewalk, designated by zone painting or curb.

Bicycle Route - designation of existing road with signing only and shared by motor vehicle traffic with no separation.

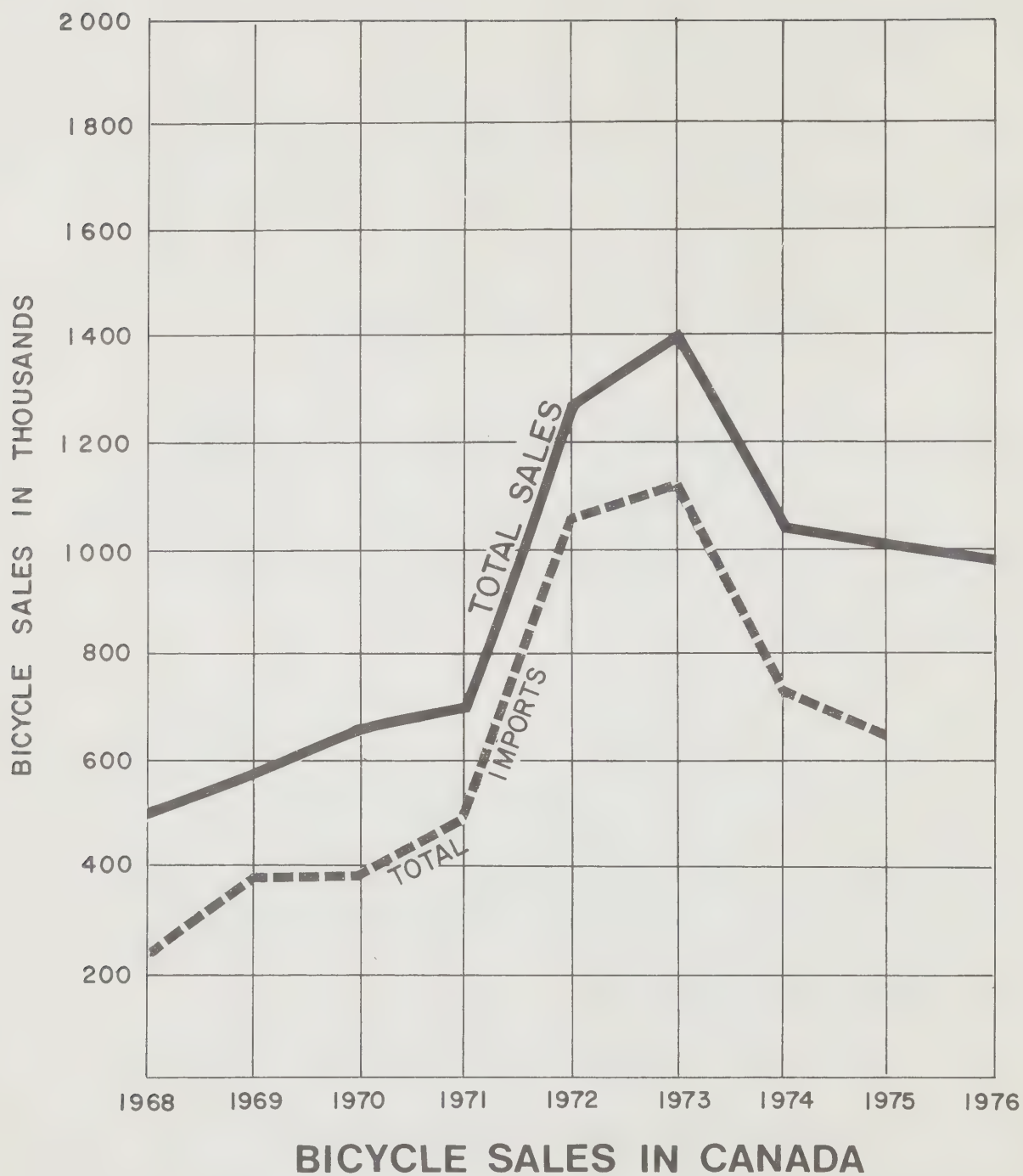
ANALYSIS

I Construction and Funding

Trends - "The bicycle boom" has not continued its upward trend, as sales which increased nationally (See Figure 1) from 710,000 in 1971 to approximately 1,400,000 in 1973, have since decreased to approximately one million in 1974, and remained at this level in 1975.

Sales in Ontario constitute approximately 40 percent of the Canadian total. Bicycle sales for USA follow the same patterns as sales in Canada, except they are approximately ten times higher, proportionate to the population difference.

The estimated number of bicycles in Ontario is now about 2.5 million. This is .3 bicycles per person; (estimated by information received from the municipal questionnaire). The actual number of bicycles in use is difficult to estimate, but it can be assumed that the trends of bicycle usage varies in proportion to sales.



NOTE: SALES IN ONTARIO ARE APPROXIMATELY 40% OF CANADIAN TOTAL

INFORMATION: C.C.M. & INFORMATION CANADA

Monitoring information of bicycle usage in the USA indicates that most bicycle traffic volumes do not meet the warrants for separate bicycle facilities. (See "Warrants" below).

Monitoring information of bicycle usage in Ontario is not available. Observation indicates that the usage is low in relation to the warrants established by American Association of State Highway and Transportation officials (AASTO).

In Canada only one province and in USA 18 States have the mandate to fund special bicycle facilities. Except for five states in the USA, few facilities have been constructed by the provincial or state road jurisdictions.

Warrants - established by American Association of State Highway and Transportation Officials (AASHTO) - as a general guide, a separate bicycle facility should be provided where:

- a) bicycle volumes will be 200 or more per day in conjunction with motor vehicles volumes of 2,000 ADT or more, or,
- b) where the same bicycle volumes will be in conjunction with motor vehicular speeds of 40 m.p.h. or higher.

Public Demand - There is very little public demand in the form of resolutions by municipalities or information received from the municipal questionnaire, upon the Ministry for the funding of special bicycle facilities.

A resolution by the City of Toronto requesting Provincial grants for bicycle facilities was circulated by the City of Toronto for support to 15 municipalities with population over 100,000 with the following results:

Endorsed	9
Opposed	3
No Action	<u>3</u>
	15

From the 66 municipalities who responded to the municipal questionnaire, 22 municipalities requested government subsidies for separate bicycle facilities. See Appendix III for the summary of the response to the municipal questionnaire.

A resolution by Peel County (1973) requesting the Ministry to adopt a policy of providing and subsidizing bicycle facilities along main roads was circulating by the County of Peel for support to the other 38 upper tier municipalities with the following results:

Endorsed	13
Opposed	7
No Action	<u>18</u>
	38

There is, therefore, a not too significant municipal pressure upon the Ministry for cycling facilities to become eligible for road subsidy.

Information received from other Provinces in Canada and from the USA indicates that demand for special bicycle facilities on a Provincial or statewide basis is low:

6 provinces report low demand

2 provinces did not answer that particular question

8

8 states reported continuing or growing demand

18 states reported low or declining demand

19 states did not answer that particular question

46

Accidents (conflict with motor vehicles) - Figure 2 in Appendix I shows cyclist casualties (injury and fatal) on all Ontario roads from 1967 to 1975 and the cyclist casualty rate (rate per 1,000 population). It is apparent

that a big increase occurred from 1971 to 1973. This corresponds with the "bicycle boom," when the sales increased nationally from 710,000 in 1971 to approximately 1,400,000 in 1973. Since that time, traffic accidents involving cyclists have increased, but have remained constant in relation with the population increases.

Special bicycling facilities adjacent to roads in urban areas would not significantly reduce bicycle accidents as: 72 percent of bicycle accidents occur on local residential streets,* and 62 percent of bicycle accidents are intersection related.** Special bicycle facilities do not avoid all intersection problems.

A detailed accident analysis is shown in Appendix I.

* Technical Bulletin 70 - 10

** Table 1 in Appendix I.

CONCLUSION Re. Construction and Funding

Bicycle sales have decreased from 1,400,000 in 1973 to approximately one million in 1974 and levelled off since. Bicycle usage is low in Ontario as well as USA. Except for five states in USA, few bicycle facilities have been provided by the Provincial or State road jurisdictions. Therefore, trends do not encourage the funding or construction of special bicycle facilities by this Ministry.

In Ontario, in other Provinces, or in USA, there is very little public demand upon the Provincial or State road jurisdiction for the construction or funding of special bicycle facilities.

Since 1973, traffic accidents in Ontario involving cyclists have remained constant in relation with the population increases and special bicycle facilities adjacent to roads in urban areas would not significantly reduce bicycle accidents. Therefore, accident prevention cannot be considered as justification for the provision of special bicycle facilities in urban areas.

Based on the above rationale, the construction or funding of special bicycle facilities by the Ministry cannot be justified.

II Bicycle Registration

Provincially administered bicycle registration has been proposed as a means to reduce occurrence of theft and to recover stolen bicycles. At present this Ministry has no authority under the Highway Traffic Act to register bicycles. The Municipal Act provides such authority to the municipalities.

Trends - In Canada, there is no provincially administered bicycle registration. In USA three states (Minnesota, Hawaii and Maryland) have state administered bicycle registration. At the present time no information is available regarding the actual cost of the registration or the benefits received. Many municipalities in Ontario, in other provinces, and in USA have locally administered bicycle registration. From the 60 municipalities in Ontario which responded to the municipal survey, 55 percent report having mandatory bicycle registration, estimating 65 percent bicycles registered. 13 percent report having voluntary registration, estimating 40 percent of bicycles registered, and 32 percent report no registration or did not respond to that question.

Public Demand - In response to the municipal survey, only three municipalities requested a provincially administered bicycle registration.

Bicycle Theft - About 53,000 bicycles were reported stolen in 1975.

This is 2.15 percent of the estimated total number of bicycles in Ontario. It is generally assumed that the actual number of bicycles stolen was much higher as many bicycle thefts are not reported. 38 percent (20,000) of these stolen bicycles were recovered. The total value of the 33,000 bicycles not recovered is approximately \$1,650,000, assuming an average value of \$50.00 per bicycle. The majority of stolen bicycles were reported not locked when stolen and studies* have shown that 60 to 80 percent of bicycle thefts occurred on residential property.

In response to the municipal survey, 46 percent of the municipalities consider bicycle theft a major problem while the remainder, 54 percent, have the opposite view.

There is basically two ways in which to deter bicycle theft:

1. bicycle registration
2. encourage bicyclists to properly lock their bicycles

* Bicycle Transportation Plan and Program, District of Columbia
Bicycling in Pennsylvania

The main purpose of bicycle registration would be to assist in the recovery of stolen bicycles, since its value as a deterrent of theft is highly questionable. The main deterrent would be properly secured bicycles, away from home as well as around home.

CONCLUSION Re. Bicycle Registration

A provincially administered bicycle registration is not favoured because of the high administration cost, and the relatively low return. Also there is very little public demand for it. It would appear, therefore, that this area can at the most be recognized as a municipal responsibility.

Bicycle theft is a problem. Of the number of bicycles stolen, the number of bicycles recovered indicates that even a partial and uncoordinated bicycle registration would be effective. Therefore, we can assume that an improved and uniform system of bicycle registration would help to recover more bicycles and would be desirable if administered by the local municipality.

III Safety Education

The Ministry of Transportation and Communications is committed to bicycle safety education programs and provides free teaching material. Bicycle safety education material for adults is distributed through: 26 Safety Councils in Ontario, Ontario Information Centres, bicycle stores, police departments, etc. The main effort is directed at children.

The program is called "Go Safely Cyclers Course". It has been designed to provide children in Ontario elementary schools with classroom instruction on bicycle safety rules, bicycle maintenance and operational skill tests. This material is also utilized by clubs and private citizens for the purpose of teaching children safe cycling.

As of October 15th, 1976, 70 percent of the elementary schools in Ontario have requested and have been supplied the safety education materials.

The course is voluntary and not all schools are using this bicycle safety education program. Some children therefore may not receive bicycle safety education through any medium.

It is generally accepted that safety education is the most effective measure for accident prevention.

Over 76 percent of all bicycle related deaths are caused by head injuries.* In addition to the bicycle/motor vehicle accidents, many serious accidents occur, involving cyclists only, which are not reported. In view of the trend to lighter speedier bicycles, cyclist should be encouraged to wear protective helmets.

CONCLUSION Re. Safety Education

Safety education, which is considered the most effective means of accident prevention is not availed by all schools. It is desirable that safety education be made available to every child.

Under this program of Safety Education, the aspect of bicycle theft and its prevention might also be addressed.

Cyclists travelling at higher speeds should be encouraged to wear protective helmets.

* By National Consumer Product Safety Commission, USA

IV Legislation

In Ontario the main legislative responsibility for cyclists, bicycles and bicycle facilities rests with the Province. Bicycles are classed as vehicles and come under the Highway Traffic Act and Regulations, and are under the same rules and regulations as all road users, unless otherwise specified. (See Appendix II). Some of the legislative powers have been delegated to the municipalities, under conditions specified by the Municipal Act or the Public Transportation and Highway Improvement Act. Therefore the municipal by-laws become the legal basis for such regulations.

A number of legislative changes have been proposed by some municipalities. These proposals have been recorded and analysed; (See Appendix II). Some of the proposed amendments were found not justified and some were already in the Acts, therefore no change was found necessary.

The Highway Traffic Act, Part V and Regulation 416 describes and specifies equipment which must be carried by vehicles used on public roads such as lights, reflectors and alarm devices.

The present legislation makes no reference to braking system requirements for bicycles. The 1974 bicycle accident analysis revealed that the number of bicycle accidents related to defective brakes were small, nevertheless it is felt that a working order braking system should be mandatory equipment required for bicycles using public roads.

CONCLUSION Re. Legislation

A working order braking system should be mandatory equipment for bicycles using public roads.

RECOMMENDATIONS

I Construction and Funding

The Ministry should not construct or fund special bicycle facilities .

II Bicycle Registration

The Ministry should develop guidelines for a uniform locally administered bicycle registration system, which could be expanded to a centralized recordkeeping system at a later date if required. This recommendation is referred to the Drivers and Vehicles Branch of the Ministry .

III Safety Education

Bicycle safety education should be made compulsory by the Ministry of Education to all Ontario elementary schools.
(Ministry of Education)

Bicycle theft problems and the preventive measures should be added to the bicycle safety education program. (Public and Safety Information Branch)

Cyclists travelling at higher speeds or using roads with speed limits higher than 30 m.p.h. should be encouraged to wear protective helmets. (Public and Safety Information Branch).

IV Legislation

Regulation 416 should be expanded to include: Every bicycle shall be equipped with a working order braking system.



Ministry of
Transportation and
Communications

Memorandum

To:

Assistant Deputy Ministers
Executive Directors
Branch Directors
Regional Directors
District Engineers

From: G. H. Johnston

Attention:

Regional Managers(Drivers & Vehicles)
Managers, Engineering and R.O.W.

Date: June 9th, 1977

Our File Ref.

Office and Section Heads

In Reply to

Subject:

Bicycling: Provision of Facilities for and Promotion of Safety Education;
Legislation Regarding Bicycles and Bicycling Facilities

This memorandum supersedes and cancels Circular 74-070.

1. PURPOSE

The purpose of this memorandum is to inform Ministry staff of the Ministry's current policy regarding bicycling and bicycling facilities.

2. INTRODUCTION

In response to the increase in the number of bicyclists and miles travelled by them in 1971 and 1973 in Ontario and the resulting rise in accidents in which bicycles were involved, the Ministry prepared a policy position with respect to bicycling in 1974. This position was reviewed again in 1976 to ensure that the existing policy represents current values and needs.

The findings of the review were presented to the Ministry's Strategic Policy Committee in November, 1976. The Ministry's present policy as well as the position endorsed by the committee is set forth under 3. POLICY.

3. POLICY

- (1) This Ministry does not consider the provision of special bicycling facilities, such as bicycle paths and lanes, to be the responsibility of road jurisdictions; accordingly, expenditures for such facilities are not eligible for municipal road subsidies.
- (2) This Ministry will continue to assist in the planning of urban bicycle facilities by recognizing such expenditures as a sharable cost in municipal planning studies.

... 2

- 2 -

RE: Bicycling: Provision of Facilities for and Promotion of Safety Education;
 Legislation Regarding Bicycles and Bicycling Facilities

- (3) To assist municipalities in the recovery of stolen bicycles, this Ministry will develop guidelines for a uniform bicycle registration system, locally administered.
- (4) This Ministry will continue to:
 - (a) Promote bicycle safety, in the broader sense;
 - (b) Promote the education of cyclists and motorists alike, stressing the necessity that each acknowledge the road-use right of others.
- (5) Bicycle safety education programs will be expanded to include reference to bicycle-theft problems and preventive measures.
- (6) Bicycle safety education will be made available to all elementary school children through programs of the Ministry of Education.
- (7) This Ministry will review the provisions of The Highway Traffic Act and Regulation 416 made under The Highway Traffic Act to determine the most suitable means to ensure that bicycles are manufactured with adequate braking mechanisms and that the owners of bicycles are required to maintain braking systems in proper working order.
- (8) The Ministry decided to postpone making recommendations respecting the wearing of protective helmets since apparently there are as yet no standards for such headgear.
- (9) (a) Traffic Control devices such as BICYCLE ROUTE Sign Rb-69- and the related Tab Sign Rb-69t- and the BICYCLE PROHIBITION SIGN Rb-67 (which has replaced the former BICYCLES NOT ALLOWED sign) are eligible for subsidy when used on a roadway. These signs are shown in the new edition of the Manual of Uniform Traffic Control Devices, Ontario, which has recently been published by the Ministry.

BICYCLE ROUTE Sign Rb-69 advises motorists of the existence of officially designated bicycle routes along municipal roadways where both bicycles and motor vehicular traffic are permitted.

... 3

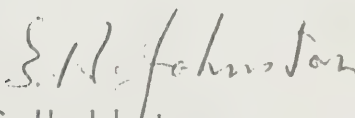
- 3 -

RE: Bicyling: Provision of Facilities for and Promotion of Safety Education;
 Legislation Regarding Bicycles and Bicycling Facilities

BICYCLE ROUTE Sign Rb-69 may also be used to indicate officially designated bicycle routes, such as pathways, that do not carry motor vehicular traffic. The sign will be erected to orient the bicyclist to the designated route. This sign, however, is not eligible for municipal road subsidy when it is erected on other than a roadway.

- (b) The BICYCLE PROHIBITION Sign, Rb-67, is for use on the approach ramps to a freeway, highway or bridge where bicycles are prohibited by Regulation pursuant to The Highway Traffic Act, or by approved municipal by-law.
- (10) Local municipalities may designate for the exclusive use of cyclists any lane of a highway which has been divided into clearly marked traffic lanes. (The Highway Traffic Act, Section 103, Clause (c)).

GHJ:ma


G. H. Johnston,
Executive Director.

APPENDIX I

ACCIDENTS - CONFLICT WITH MOTOR VEHICLES

ACCIDENT ANALYSIS A

Figure 2 shows cyclist casualties (injuries and fatalities) on all Ontario roads. It shows also cyclist casualties per thousand population. It is apparent that a big increase occurred from 1971 to 1973. This corresponds with the "bicycle boom", when the sales increased nationally from 710,000 in 1971 to approximately 1,400,000 bicycles in 1973 (see Figure 1). Since that time, traffic accidents involving cyclists have increased, but have remained constant in relation with the population.

Figure 3 shows cyclist injuries and fatalities separately, and where available, the number and the percentage occurring on highways under Provincial jurisdiction. Cyclist fatalities have increased and reached a peak in 1973 with 69 fatalities, but have decreased to 45 and 56 fatalities in 1974 and 1975 respectively.

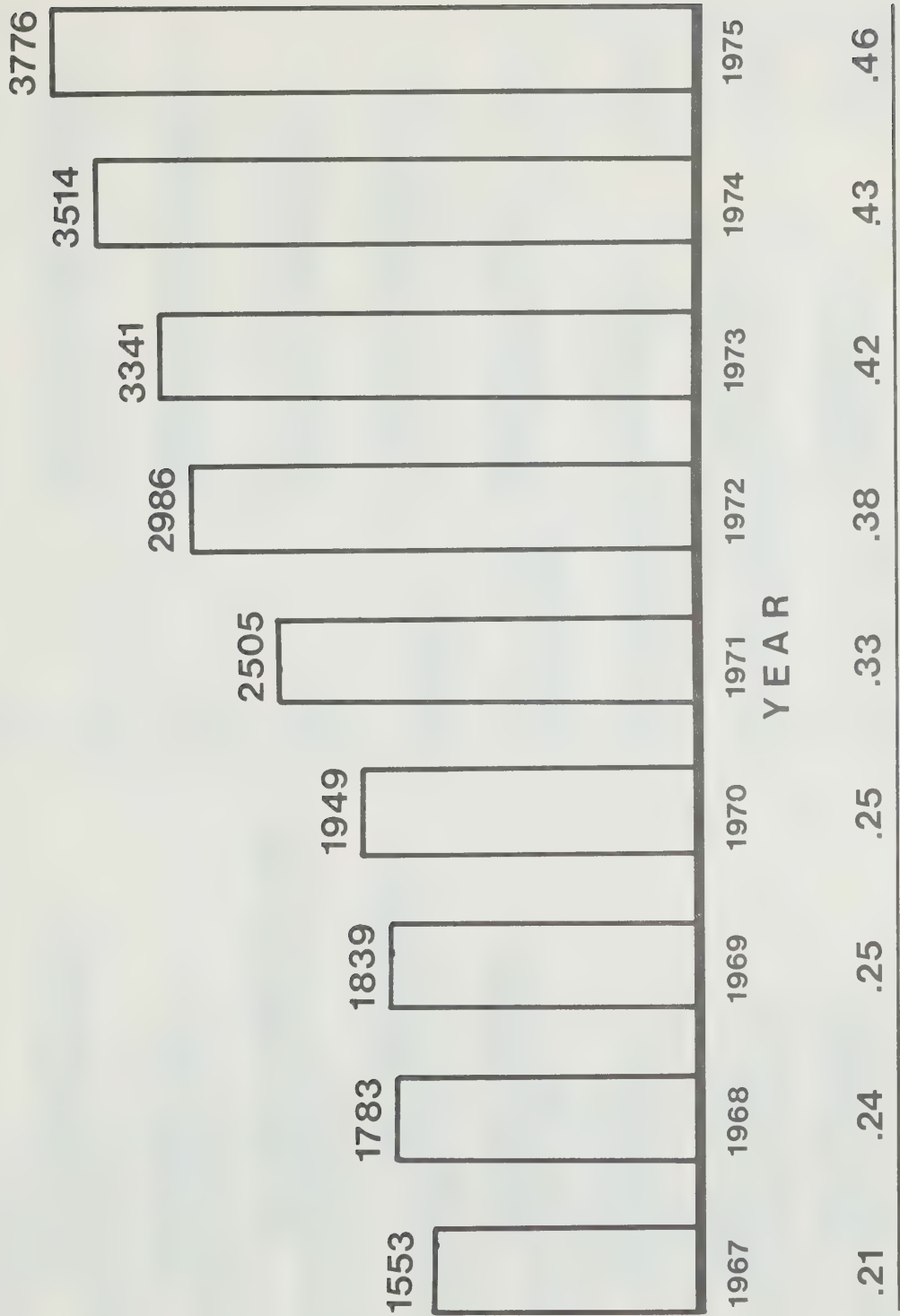
Figure 4 shows cyclist injuries on all roads broken into age groups, and it is apparent that the big increase in 1971 and 1972 has been in the 15-24 year age group. Injuries in the 0-14 year group have increased quite steadily. Injuries in the over 25 group have increased, but are still less than 10 percent of the total.

Figure 5 shows the same breakdown for cyclist fatalities. Fatalities in the over 25 years group have increased since 1971. These fatalities contributing 4 percent of the total fatalities in 1971 have increased to 16 percent in 1975. It is significant that deaths among the 0-14 years group has not increased since 1971 and for the 15-24 years group since 1973.

Figure 6 shows injuries and fatalities on all Ontario roads among cyclists, motorcyclists and motorcycle passengers, pedestrians and total for all injuries and fatalities, shown to uniform scale, in order that the absolute number of cyclist injuries and fatalities may be compared with those from other causes.

CYCLIST CASUALTIES

INJURY & FATAL



CYCLIST CASUALTIES PER 1000 POPULATION

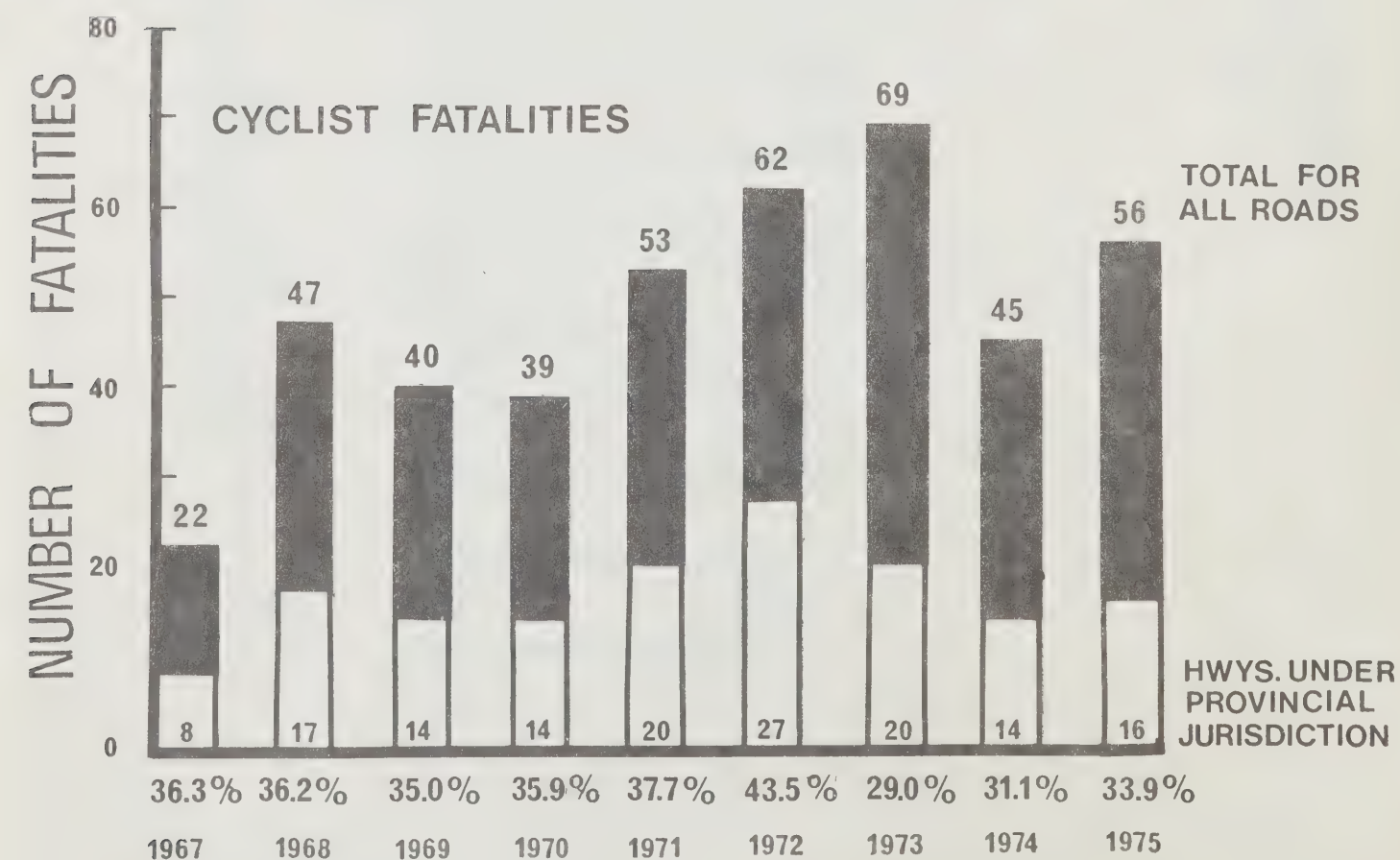
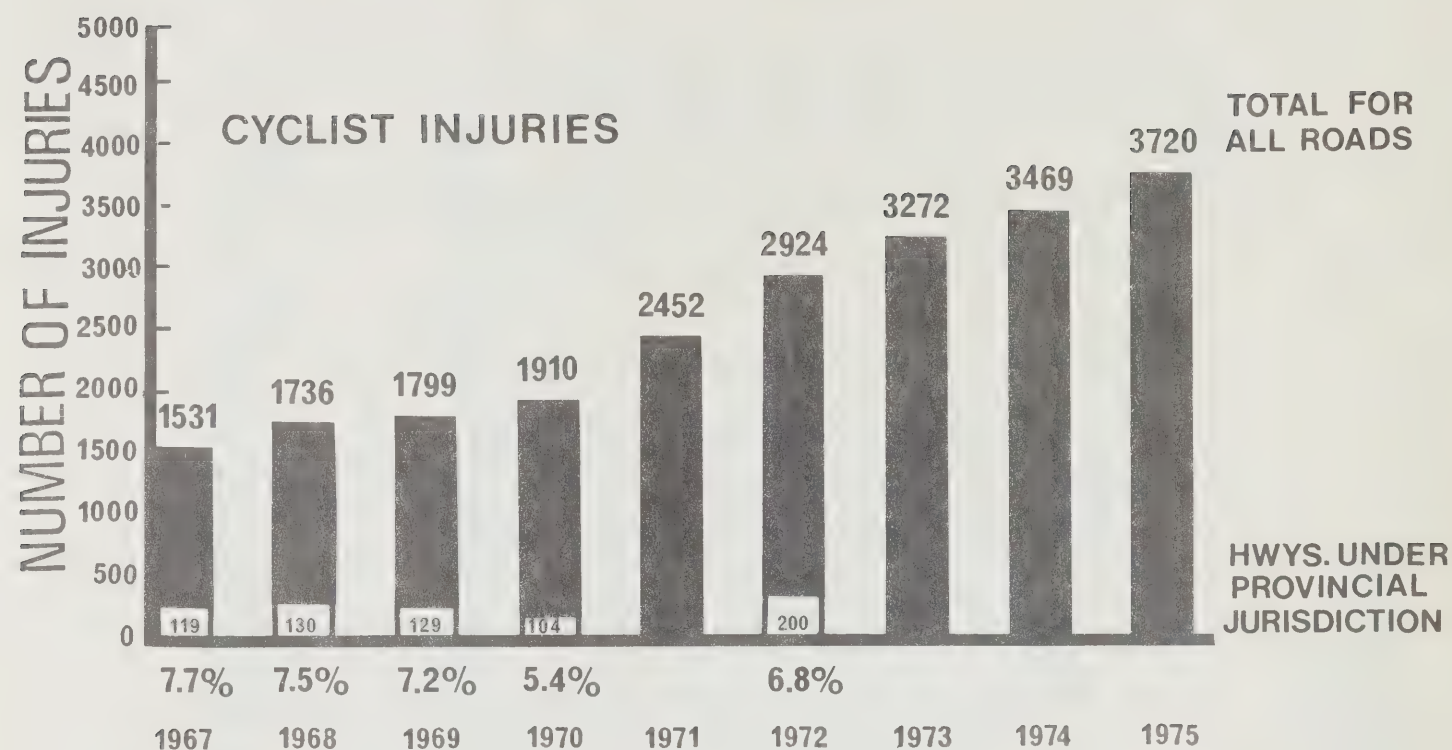
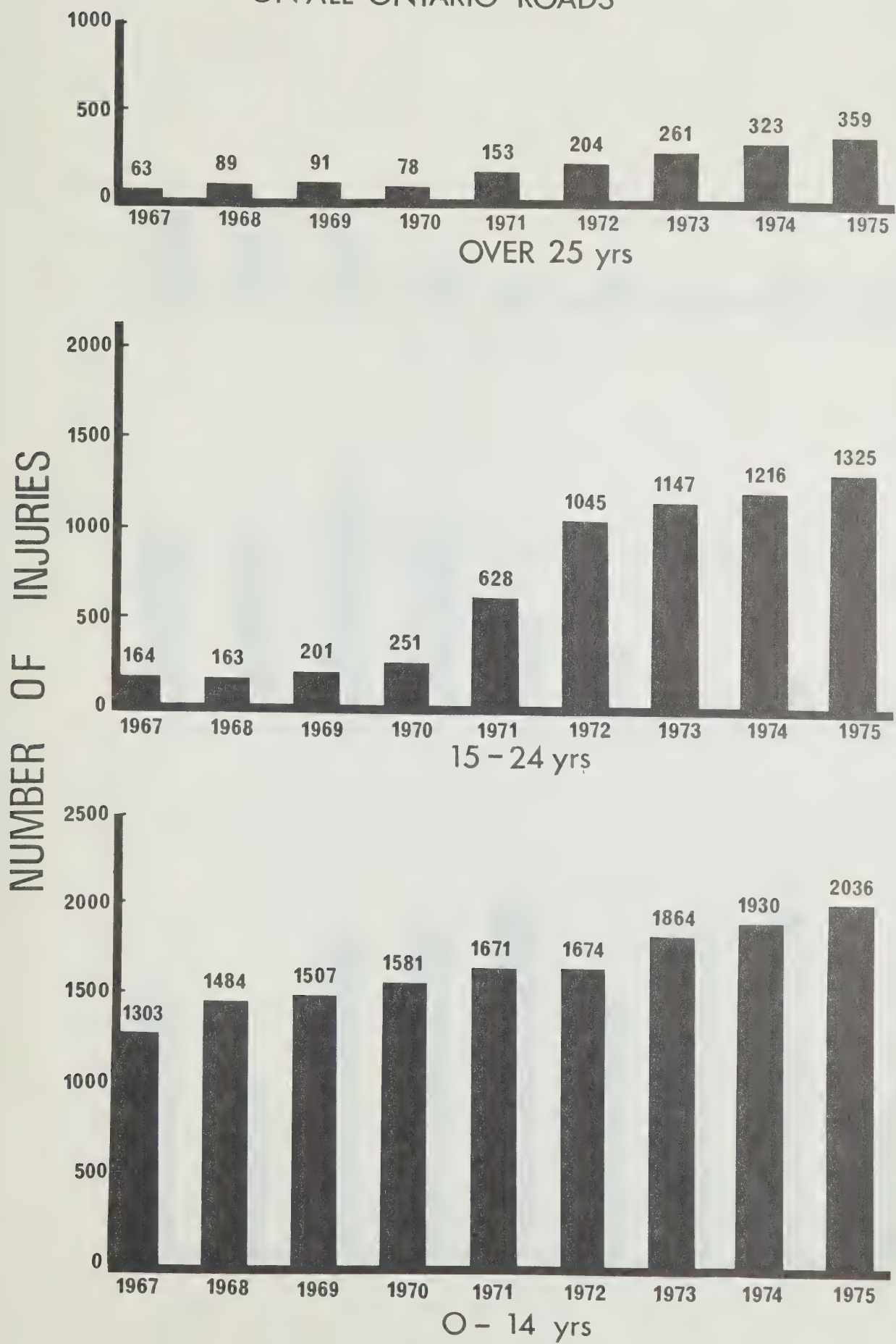


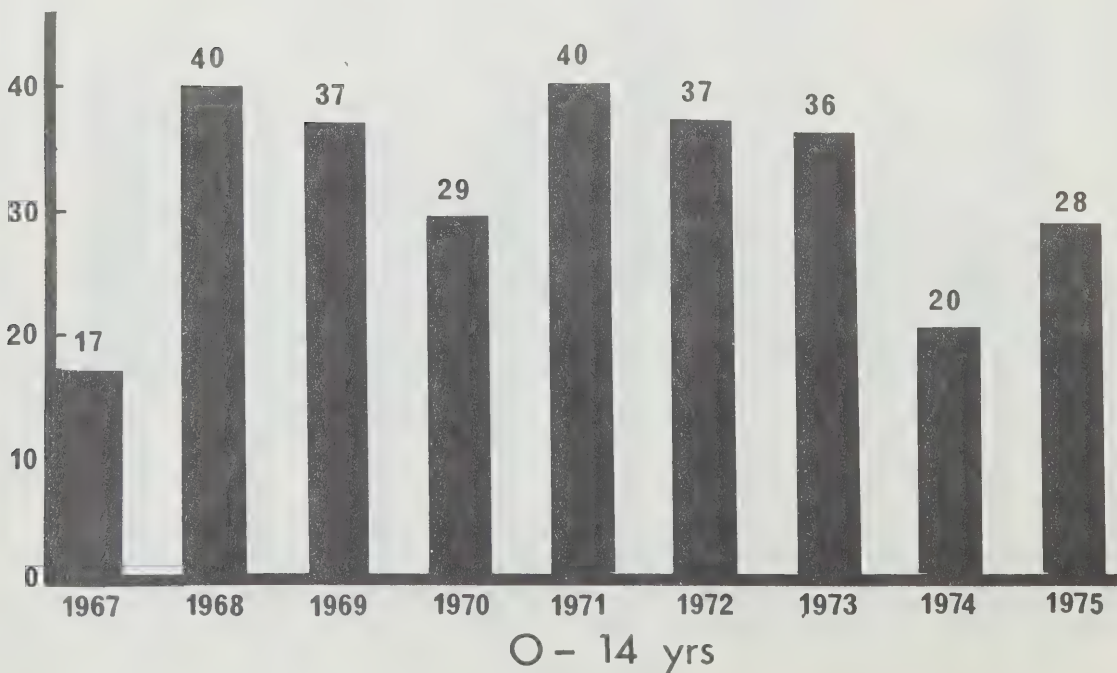
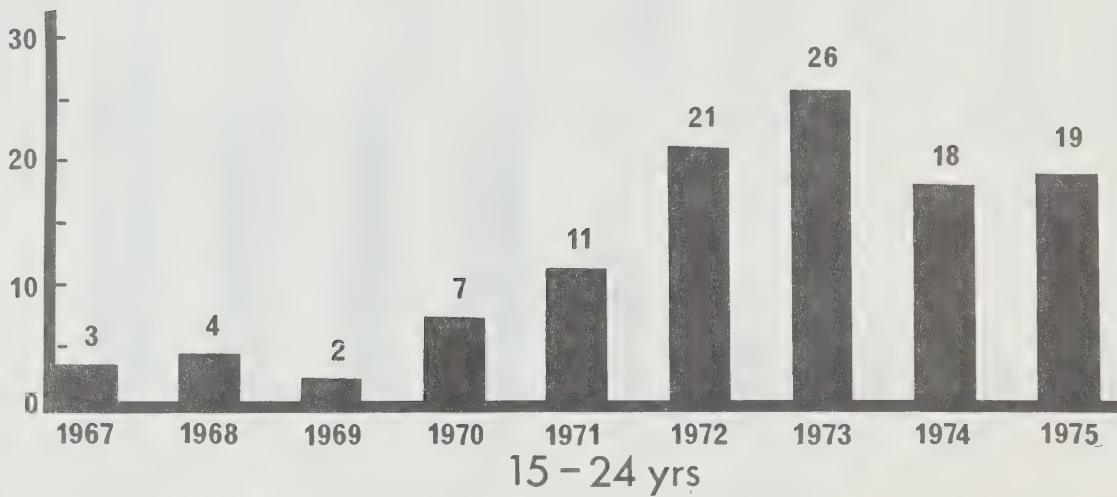
FIGURE 3

CYCLIST INJURIES BY AGE GROUPS ON ALL ONTARIO ROADS

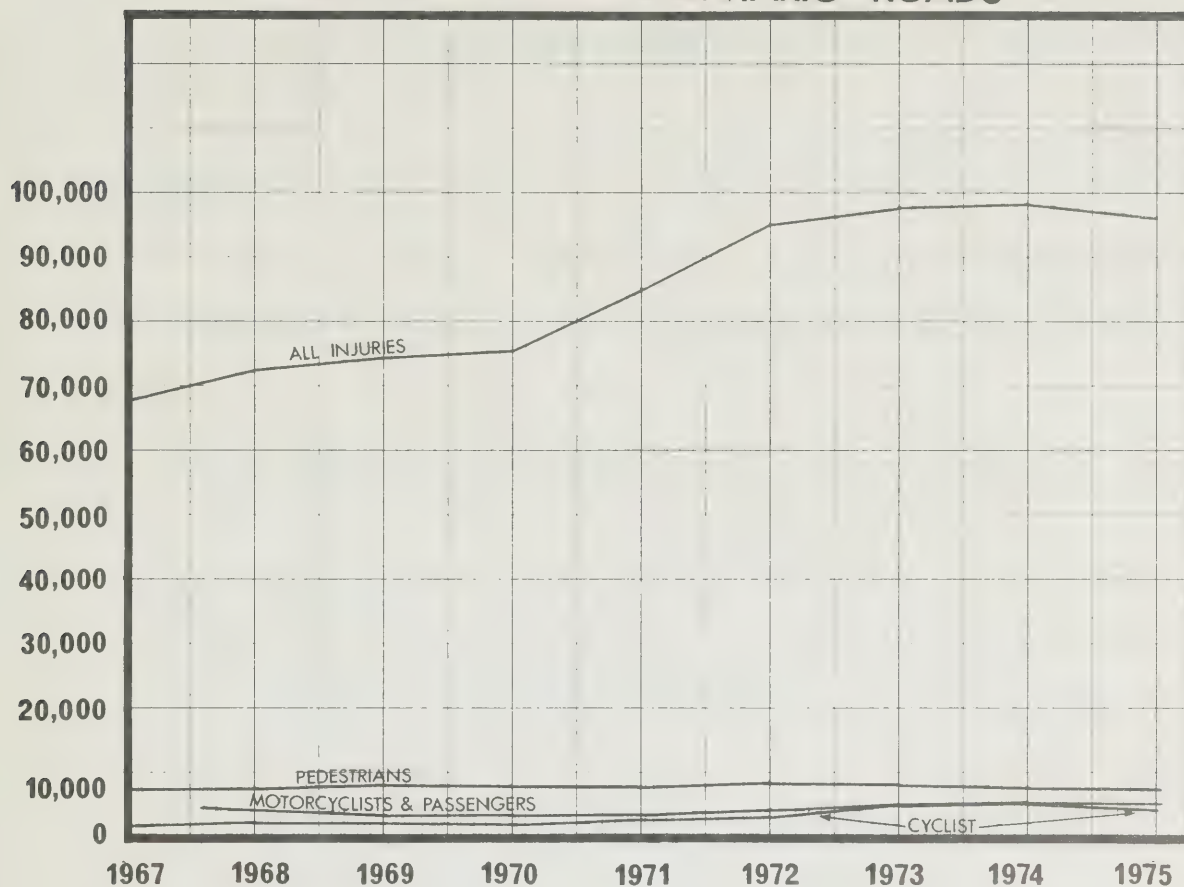


CYCLIST FATALITIES BY AGE GROUPS ON ALL ONTARIO ROADS

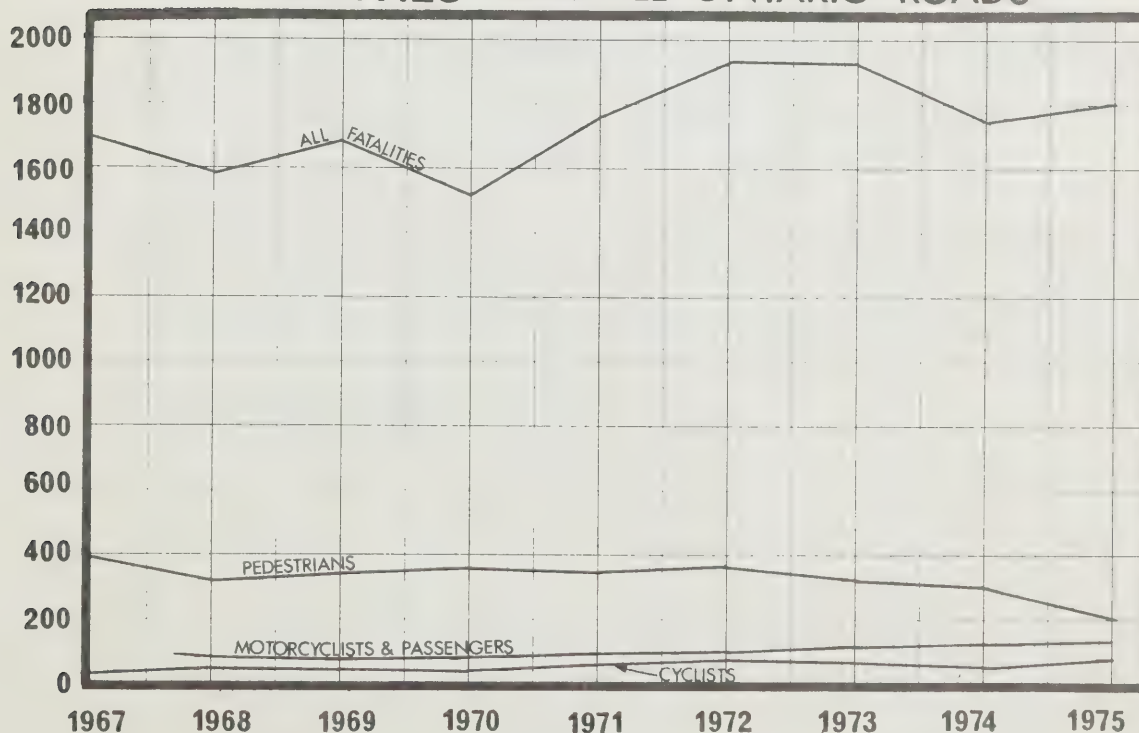
NUMBER OF FATALITIES



INJURIES ON ALL ONTARIO ROADS



FATALITIES ON ALL ONTARIO ROADS



ACCIDENT ANALYSIS B

Introduction

The following analysis was produced in 1974 in order to:

- A. Review the need for expanded education programs aimed at:
 - (i) Motorists
 - (ii) Cyclists in appropriate age groups

- B. Review the desirability of increased enforcement of existing legislation and the introduction of new legislation in such areas as:
 - (i) Regulation of age and ability of cyclists
 - (ii) Expanding requirements for bicycles and their equipment
 - (iii) Prohibiting bicycles from further classes of roads

- C. Review accident records for concentration on recreational access routes from metropolitan areas; define possible solutions if such concentration exists.

This brief is the result of such investigation and derives from a comprehensive analysis of accident statistics covering a 2½-year period from July 1, 1971 to December 31, 1973.

The data was extracted from the computerized master collision file, supplemented by copies of accident reports and includes the total of nearly 8,000 accidents involving cyclists on all classes of Ontario roads.

DATA COLLECTION AND ANALYSIS

In order to determine precisely the most common conditions surrounding cyclist accidents, a broad range of conditions and actions by both cyclist and motorist were identified. All accident records were searched by computer and the number of occurrences of each condition or action summarized for (i) accidents on all Ontario roads, and (ii) accidents on rural highways (Ontario provincial highways with speed limit 45 m.p.h. or greater). A further analysis of bicycle maneuvers and light conditions was performed for each of intersection and non-intersection related accidents on rural highways.

Since a variable degree of error is introduced from the initial filing of the accident reports by the police to preparation of the computerized data bank by our Electronic Computing Branch, all statistics in the attached tables are reported as percentages of the total number of accidents in each category. The data in Tables I to IV derive from analysis of the nearly 8,000 cyclist accidents, approximately 400 of which occurred on rural highways.

Table I: Site Conditions

It is apparent from Table I that visibility, road condition, road type and road surface condition have negligible effect on accident rates on all roads. There is some indication, however, that accidents more frequently involve road alignments which have significant vertical and

horizontal curvature (16.5% of all accidents, 26.8% of those on rural highways), and cycling before or after daylight (18.2% for all roads, 27.4% for rural highways). Although there is unlikely to be a ready solution to the problem of road alignment, there may be reason to suspect that bicycles are not properly illuminated for night riding. This is borne out only to a minor extent in Table II which indicates that only 1.9% involve defective bicycle lights* for accidents on all roads, compared to a more significant 8.2% on rural highways. A more important condition associated with cyclist accidents in road location (whether at or near an intersection with another road, driveway or railway crossing). For all roads, the largest sector, 38.1% occur at intersections with an additional 11.1% related to intersections (for example, weaving sections near intersections). 12.8% involve private drives and the remaining 37.9% have no apparent connection with intersections or crossings. On rural highways, 23.4% of cyclist accidents involve intersections, which is quite high, considering that rural highways have fewer intersections than many other classes of roads.

Table II: Bicycle

Approximately 20% of all cyclist accidents are related to defective bicycles, but insufficient data is available from accident reports to determine precisely the defects.

* It is sometimes difficult to determine at the accident scene whether the defect in lights existed before collision or whether it resulted from the collision.

Table III: Motorist

While the condition of the motorist on the whole is considered to be normal in 91.7% of cyclist accidents, the 8.8% of rural highway accidents involving alcohol or other drugs by the motorist is the result of a dangerous and unnecessary hazard. This problem is, of course, a formidable problem in all highway accidents, although cyclists are more vulnerable due to their relative size on the roads.

Tables II and III: Cyclist and Motorist Maneuvers and Actions

Due to the relative positions, sizes and speeds of bicycles and motor vehicles, it is to be expected that at intersections, left turns by both cyclist and motorist would result in a significant occurrence of accidents. Also, it is expected that right turns, particularly by the motorist, would result in a somewhat smaller, but significant number. These are borne out in the analysis, which indicates in Table II that left turns by cyclists account for 11.6% of accidents on all roads, left turns by motorists 13.9% and right turns by motorists 8.0%.

Once again the relative sizes and speeds of bicycles and motor vehicles are likely to result in significant occurrences of failure by motorists to yield right-of-way to cyclists, primarily due to the difficulty on the part of motorists to be at all times aware of the presence of cyclists. This is borne out by the statistics which reveal that 12.4% of cyclist accidents involve failure of motorists to yield right-of-way. The same statistic for

accidents on rural highways is negligible (0.5%) due perhaps to less frequent intersections. The problem for rural highway accidents appears to be improper passing, accounting for 9.4%.

Table IV: Relationships Among Bicycle Maneuver, Light Condition
and Road Location

In order to determine whether combinations of several elements would pinpoint some particularly hazardous situations, bicycle maneuver and light conditions were analyzed in combination with road location. The left turn is again dominant both at intersections (8.8%) and otherwise (10.0%) for a total of 18.8% of all rural highway accidents. An additional 8.5% occur as a result of cyclists changing lanes and may be indirectly related to intersections.

With regard to light conditions, it was found that only 4.8% or 1/4 of the 23.4% of accidents occurring at intersections happened before or after daylight, while 23.5%, or 1/3 of the 76.6% not occurring at intersections happened before or after daylight. We conclude from this, that light condition is not a determining factor in causing accidents at intersections.

Figure 7: Cyclist Casualties by Age Groups

This figure indicates that accident rates are fairly uniformly distributed throughout all age groups with a rapid decline beginning at age 16 when most young people begin to drive automobiles.

Figure 8: Cyclist Casualties on all Ontario Roads by Age Groups in 1973

This figure indicates that cyclist casualties per million bicycle miles is much lower for the 25 and over age group than for 5-14 and 15-24 age groups.

Concentration of Accidents on Recreational Access Routes

All rural cyclist accidents were plotted to determine whether any concentrations exist, but were found to be almost randomly distributed with no such concentrations.

SUMMARY AND CONCLUSIONS

The foregoing analysis reveals no unusual facts, but in greater detail and statistical confidence confirms the findings and recommendations of the original brief. In reply to the recommendations for further study outlined in the introduction of this review, we have the following comments.

- A. (i) The greatest potential for collision is the result of the conduct of both motorists and cyclists particularly at or near intersections, whether they be with roads or private drives, and before or after daylight. It is important that we continue our efforts to educate both cyclists and motorists to increase their awareness of the presence of other road users. This is particularly important because of the relative positions, sizes, speeds and vulnerability of automobiles and bicycles.
- (ii) There is no age group for which special consideration is required.
- B. (i) While no special consideration is required for a particular cyclist age group, the present educational programs should be continued with particular emphasis on rules pertaining to intersections and turning movements. Also important is that cyclists be made aware of their vulnerability at night and on roads with considerable horizontal and vertical curvature.

Despite the similar rights both motorist and cyclist have to the road, the cyclist should be encouraged to keep clear of traffic lanes in situations such as hilly or winding roads where the cyclist cannot be detected early enough to avoid collision.

(ii) The only significant defect found in bicycle equipment is illumination. Since the frequency of accidents before or after daylight is significant while the number involving defective lights was not, perhaps the standard for lighting equipment should be reconsidered.

(iii) Prohibiting bicycles from further classes of roads would not be effective since most cycling and resulting casualties occur on local streets where cycling demand is greatest.

C. There are no concentrations of accidents on recreational access routes from metropolitan areas.

Through this analysis of cyclist accidents, it was found that continued emphasis should be placed on education of motorists and cyclists of all ages, particularly with respect to proper procedures at intersections and provision for night riding where applicable. The analysis in no way suggests that there are any advantages in changing the present policy and position of the Ministry with respect to bicycling.

TABLE I
BICYCLE COLLISION STATISTICS
% OF TOTAL ACCIDENTS BY CONDITION

SITE CONDITIONS		All Ontario Roads	Rural Prov. Highways
Visibility	- clear	93.1	94.4
	- rain, snow, fog	<u>6.9</u>	<u>5.6</u>
		100.0	100.0
Light	- daylight	81.8	72.6
	- dawn, dusk, dark	<u>18.2</u>	<u>27.4</u>
		100.0	100.0
Road Alignment	- straight, level	83.5	73.2
	- other	<u>16.5</u>	<u>26.8</u>
		100.0	100.0
Road Condition	- good	97.5	98.7
	- other	<u>2.5</u>	<u>1.3</u>
		100.0	100.0
Road Type	- paved	97.7	99.2
	- other	<u>2.3</u>	<u>0.8</u>
		100.0	100.0
Road Surface Condition	- dry	89.3	93.6
	- wet or other	<u>10.7</u>	<u>6.4</u>
		100.0	100.0
Road Location	- non-intersection	37.9	76.6
	- intersection related	11.1	23.4
	- at intersection	38.1	
	- intersection with private drive	12.8	
	- at railway crossing	<u>0.1</u>	<u> </u>
		100.0	100.0

TABLE II
BICYCLE COLLISION STATISTICS
% OF TOTAL ACCIDENTS BY CONDITION

BICYCLE AND CYCLIST		All Ontario Roads	Rural Prov. Highways
Bicycle Condition	- no apparent defect	78.5	80.4
	- unknown	15.0	6.0
	- defective lights	1.9	8.2
	- other defects	<u>4.6</u>	<u>5.4</u>
		100.0	100.0
Bicycle Maneuver	- going ahead	65.1	
	- overtaking	1.2	
	- turning left	11.6	
	- turning right	3.1	
	- making 'U' turn	0.8	
	- changing lanes	2.9	
	- merging	0.4	
	- reversing	0.1	
	- stopped or parked	0.9	
	- pulling away from shoulder	2.4	
	- pulling into shoulder	0.3	
	- not known other	<u>11.2</u>	
		100.0	
Cyclist Action	- riding properly	76.1	
	- following too close	0.1	
	- speeding too fast	1.6	
	- improper turn	3.6	
	- disobey traffic signal	0.2	
	- disobey stop sign	0.5	
	- fail to yield right-of-way	6.5	
	- improper passing	1.6	
	- lost control	0.7	
	- wrong way	0.0	
	- not known, other	<u>9.1</u>	
		100.0	

TABLE III
BICYCLE COLLISION STATISTICS
% OF TOTAL ACCIDENTS BY CONDITION

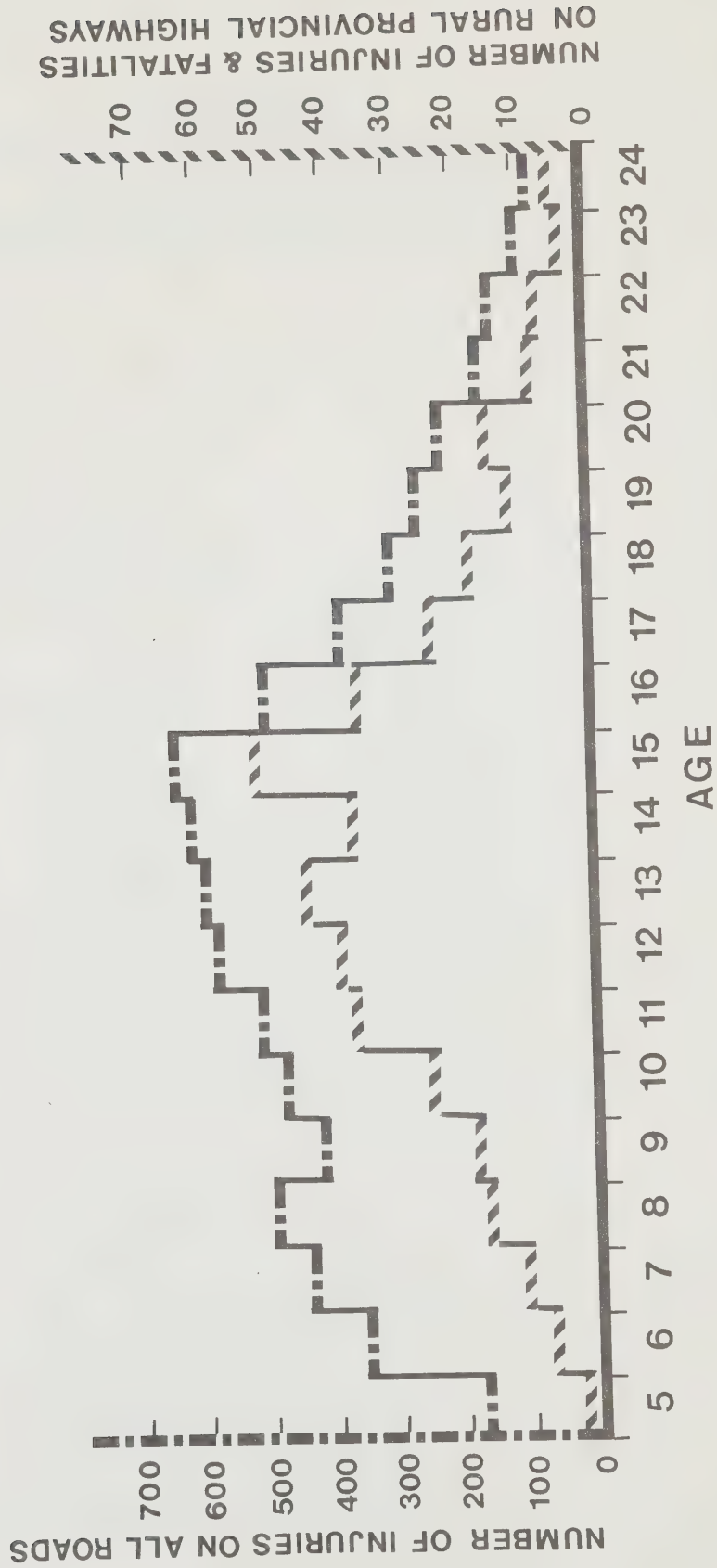
MOTORIST		All Ontario Roads	Rural Prov. Highways
Motorist Condition	- normal	91.7	88.6
	- alcohol involved	3.7	8.8
	- other	<u>4.6</u>	<u>2.6</u>
		100.0	100.0
Motor Vehicle Maneuver	- going ahead	59.9	
	- overtaking	5.6	
	- turning left	13.9	
	- turning right	8.0	
	- making 'U' turn	0.2	
	- changing lanes	0.7	
	- merging	0.3	
	- reversing	2.1	
	- stopped or parked	6.8	
	- pulling away from shoulder	0.4	
	- pulling into shoulder	0.5	
	- not known, other	<u>1.6</u>	
		100.0	
Motorist Action	- driving properly	66.2	75.9
	- following too close	0.2	-
	- speeding	1.8	4.5
	- improper turns	3.8	1.1
	- disobey traffic signal	0.4	-
	- disobey stop sign	0.5	-
	- fail to yield right-of-way	12.4	0.5
	- improper passing	1.3	9.4
	- lost control	1.0	0.3
	- wrong way	0.1	0.0
	- not known, other	<u>12.3</u>	<u>8.3</u>
		100.0	100.0

TABLE IV
BICYCLE COLLISION STATISTICS
% OF TOTAL ACCIDENTS ON RURAL PROVINCIAL HIGHWAYS

		Intersection	Non Intersection
Bicycle Maneuver	- going ahead	11.4	44.6
	- overtaking	0.3	0.3
	- turning left	8.8	10.0
	- turning right	0.6	1.1
	- making 'U' turn	0.3	0.9
	- changing lanes	0.3	8.5
	- merging	-	-
	- reversing	-	-
	- stopped or parked	-	-
	- pulling away from shoulder	0.3	3.5
	- pulling into shoulder	0.0	1.8
	- not known, other	<u>1.4</u>	<u>5.9</u>
		23.4	76.6 = 100
Light Condition	- daylight	18.6	53.1
	- after daylight	<u>4.8</u>	<u>23.5</u>
		23.4	76.6 = 100

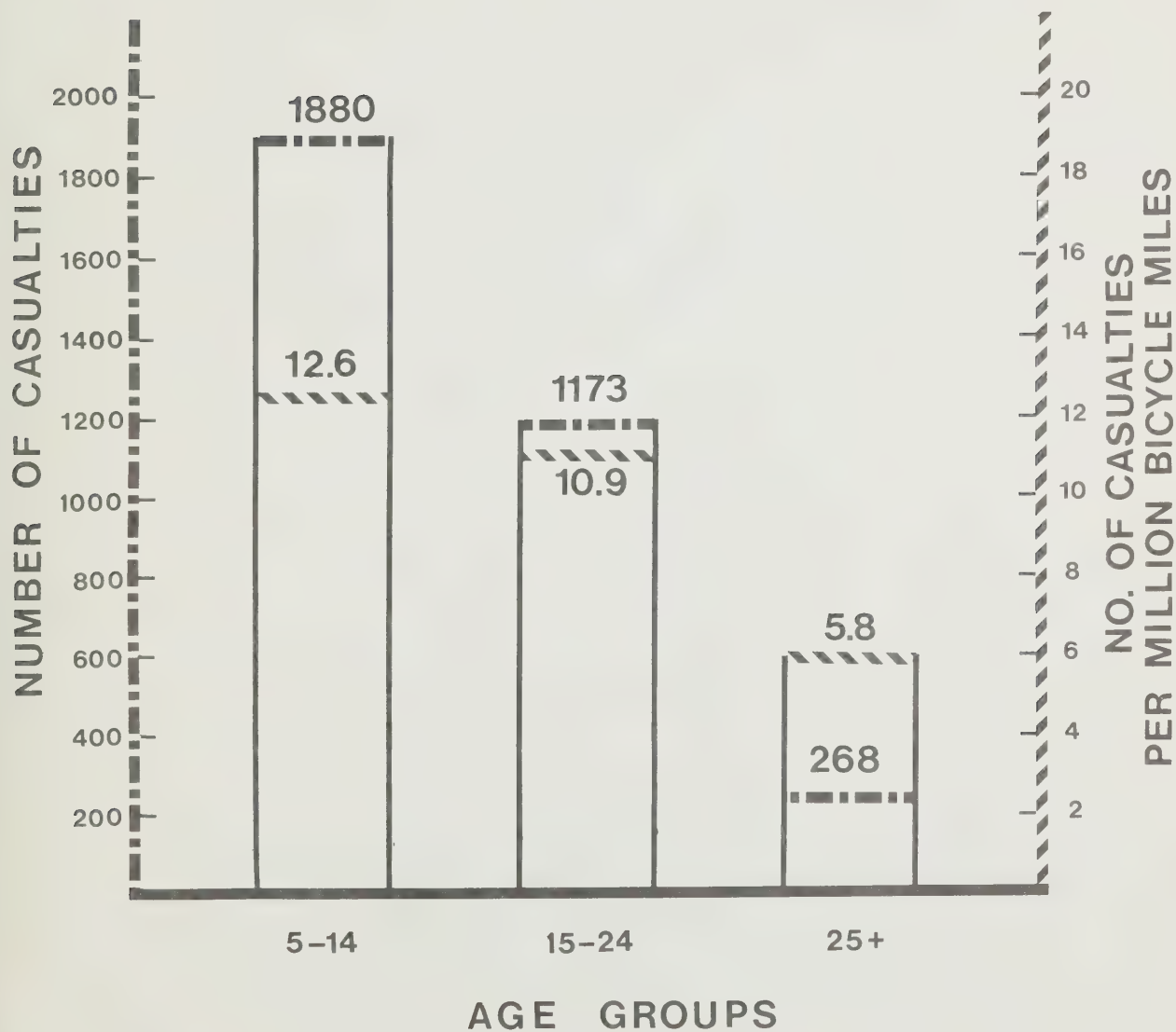
CYCLIST CASUALTIES BY AGE FROM JULY 1971 TO DEC. 31, 1973

- - - - ALL ONTARIO ROADS
 / / / / RURAL PROVINCIAL HIGHWAYS



CYCLIST CASUALTIES ON ALL ONTARIO ROADS BY AGE GROUPS IN 1973

NOTE: RIDERSHIP BASED ON
METROPOLITAN TORONTO
BICYCLE SURVEY DATA FROM
REPORT BY J. STOK AND
ASSOCIATES AND ADJUSTED
FOR ONTARIO BY BICYCLE
OWNERSHIP.



APPENDIX II

LEGISLATION

LEGISLATION IN ONTARIO

The following are extracts from The Highway Traffic Act, The Public Transportation and Highway Improvement Act and The Municipal Act applicable to bicycles and bicycle usage.

THE HIGHWAY TRAFFIC ACT

Revised Statutes of Ontario, 1970 Chapter 202 and Regulations
(amended to January, 1972).

Section 1 Sub-section 35

"Vehicle" includes a motor vehicle, trailer, traction engine, farm tractor, road-building machine and any vehicle drawn, propelled or driven by any kind of power, including muscular power, but does not include a motorized snow vehicle or the cars of electric or steam railways running only upon rails.

Thus the definition of vehicles includes bicycles, and all references in The Highway Traffic Act to vehicles apply to bicycles unless otherwise stated.

PART IV Garage and Storage Licences

Section 35 Subsection 4

(4) Any constable or any officer appointed for carrying out the provision of this Part may enter into any place where motor vehicles or bicycles are stored or dealt in, or into any garage parking station, parking lot or used car lot or premises used for the wrecking or dismantling of vehicles required to be licensed, and make such investigation and inspection as he thinks proper.

Section 36 Subsections 1, 2, 3 & 6

(1) All persons who buy, sell, wreck or otherwise deal in second-hand motor vehicles or bicycles shall keep a correct record of all motor vehicles and bicycles bought, sold or wrecked and of such information as will enable such motor vehicles and bicycles to be readily identified, and shall transmit within six days to the Department, on forms furnished by the Department, a statement of each motor vehicle bought, sold or wrecked by them and such information with reference thereto as may be required by the Department.

(2) No person shall buy, sell, wreck or otherwise deal with any motor vehicle or bicycle or trailer that has a gross weight exceeding 6,000 pounds where the manufacturer's serial number or similar identifying mark has been obliterated or defaced or is not readily recognizable.

(3) No person shall deface or remove the manufacturer's serial number or identifying marks from a motor vehicle or from the engine thereof or from a bicycle or from a trailer that has a gross weight exceeding 6,000 pounds.

Penalty (6) Every person who contravenes any of the provisions of

- (a) subsection 1 or 4 is guilty of an offence and on summary conviction is liable to a fine of not less than \$10 and not more than \$50.
- (b) Subsection 2, 3 or 5 is guilty of an offence and on summary conviction is liable to a fine of not less than \$50 and not more than \$200 or to imprisonment for a term of not more than thirty days or to both.

Part V Equipment

Section 37 Subsection 14 & 15

(14) When on a highway at any time from one-half hour after sunset to one-half hour before sunrise and at any other time when, due to insufficient light or unfavourable atmospheric conditions persons and vehicles on the highway are not clearly discernible at a distance of 500 feet or less, every bicycle or tricycle shall carry on the front thereof a lighted lamp displaying a white or amber light and on the rear thereof a lighted lamp displaying a red light or a reflector approved by the Department, and in addition there shall be placed on the front forks thereof white reflective material, and on the rear thereof red reflective material covering a surface of not less than ten inches in length and one inch in width.

Penalty (15) Every person who contravenes subsection 14 is guilty of an offence and on summary conviction is liable to a fine of not more than \$5.

Section 39 Subsection 4

- (4) The Lieutenant Governor in Council may make regulations,
- (a) requiring vehicles or any type or class thereof to be equipped with brakes or braking systems in addition to the brakes required by subsection 1, 2 or 3; and
 - (b) prescribing the standards and specifications of brakes and braking systems or any class or type thereof that are required by this section or regulations made under clause a.
- (5) All such brakes and braking systems shall be maintained in good working order and shall conform to the regulations made under this section.
- (6) Any constable or any officer appointed for carrying out the provisions of this Act may at any time inspect or cause an inspection to be made of the brakes and braking systems on any vehicle on the highway, and may, if the brakes or braking systems do not conform to the regulations made under this section, require the driver of the vehicle to proceed forthwith to make or have such brakes and braking systems made to comply with such regulations.

Section 39 of the Act provides for braking systems and under Subsection 4 the Lieutenant Governor in Council may make regulations requiring vehicles/including bicycles/ or any type or class thereof to be equipped with brakes or braking systems and to prescribe standards and specifications. Standards have been established by Regulation 416, which at present does not include standards for bicycles, however braking standards if found necessary can be added to this regulation.

Section 49 Subsection 4

- (4) Every motor vehicle, bicycle and tricycle shall be equipped with an alarm bell, gong or horn, which shall be kept in good working order and sounded whenever it is reasonably necessary to notify pedestrians or others of its approach.

Section 57

No person shall drive or operate or permit the driving or operation upon a highway of a vehicle that is in such a dangerous or unsafe condition as to endanger the driver or operator or any occupant thereof, or any person upon the highway.

The word 'vehicle' includes, by definition, a bicycle.

Part IX Rules of the Road

Section 98 Subsection (2) & (5)

- (2) Where a person in charge of a vehicle on a highway meets a person travelling upon a bicycle or tricycle, the person in charge of the vehicle shall allow the person travelling on the bicycle or tricycle sufficient room on the roadway to pass.
- (5) When a person on a bicycle or a tricycle on a highway is overtaken by a vehicle or horseman travelling at a greater speed, the person so overtaken shall turn out to the right and allow such vehicle or horseman to pass and the person so over-taking a bicycle or tricycle shall turn out to the left so far as may be necessary to avoid a collision.

Section 113 Subsection 1 & 2

- (1) Where a person in charge of a vehicle or on a bicycle or tricycle or on horseback or leading a horse on a highway overtakes a street car or a car of an electric railway, operated in or near the centre or the roadway, which is stationary for the purpose of taking on or discharging passengers, he shall not pass the car or approach nearer than six feet measured back from the rear or front entrance or exit, as the case may be, but this subsection does not apply where a safety zone has been set aside and designated by a by-law passed under paragraph 111 of subsection 1 of section 354 of The Municipal Act.
- (2) No person in charge of a vehicle, or on a bicycle or tricycle, or on horseback or leading a horse, overtaking a street car or the car of an electric railway, operated in or near the centre of the roadway, which is stationary or in motion, shall pass on the left side of such car is travelling, but this subsection does not apply to a vehicle belonging to a municipal fire department while proceeding to a fire or answering a fire alarm call or where the street car or car of an electric railway is being operated on a highway designated for the use of one-way traffic.

Section 122 Subsection 1 & 2

- (1) A person riding upon a bicycle, a coaster, roller skates, skis, a toboggan, a sled or a toy vehicle shall not attach it or them or himself to a vehicle or street car on a roadway.

- (2) No person riding on a bicycle designed for carrying one person only shall carry any other person thereon.

Section 128 Subsection 1 & 2

- (1) The Lieutenant Governor in Council may make regulations prohibiting or regulating the use of any part of the King's Highway by pedestrians or animals or any class or classes of vehicles.
- (2) The council of a municipality may by by-law prohibit pedestrians or the use of bicycles or animals on any highway or portion of a highway under its jurisdiction on which the maximum speed limit is 50 miles per hour or more.

Section 103 Clause (c)

103. Where a highway has been divided into clearly marked lanes for traffic,
 - (c) any lane may be designated for slowly moving traffic, or traffic moving in a particular direction, or classes or types of vehicles, provided that official signs are erected to indicate such designation, and, notwithstanding section 93, where a highway is so designated the driver of every vehicle shall obey the direction on the official signs.

The above reference regarding types of vehicles would be applicable also to bicycles and will allow designating portions of highways for the exclusive use of cyclists.

Ontario Regulation 185/75

1. No person shall operate,
 - (a) a bicycle;
 - (b) a motorcycle having a cylinder swept volume of 50 cubic centimetres or less;
 - (c) a motorcycle driven by electricity stored in the vehicle; or
 - (d) a motor assisted bicycle,on a controlled-access highway unless he resides on lands adjoining the controlled-access highway to which lands there is no other means of access by highway.

THE PUBLIC TRANSPORTATION & HIGHWAY IMPROVEMENT ACT

Revised Statutes of Ontario, 1970 chapter 201 (as amended by chapter 61).

Part I The King's Highway

Section 21 Subsection 1 & 2

21. (1) The Minister and a municipality in which a part of the King's Highway is situate or an owner of land adjoining a part of the King's Highway enter into an agreement for the construction of a roadway of a greater width or with different specifications than those for the remainder of the roadway, and the Department may construct the roadway accordingly.

(2) The additional cost entailed under such an agreement to be borne by a municipality may be raised by a special tax or by the issue of debentures under The Local Improvement Act or The Municipal Act, and debentures issued under either Act or The Municipal Act, and debentures issued under either Act shall be payable within a period not exceeding twenty years from the date of the debentures, but it is not necessary to obtain the assent of the electors to any by-law for the issue of such debentures under The Municipal Act or to observe any of the provisions of The Local Improvement Act with respect to the undertaking of works as local improvements.

Part XIV General

Section 97, Subsection 1, 2, 3 & 4

97 - (1) A local municipality may construct a sidewalk or other improvement or service on a highway or road with the written consent of the authority having jurisdiction and control of the highway or road.

(2) The cost of such a sidewalk, improvement or service may be met out of the general funds of the local municipality or out of funds of the authority having jurisdiction and control of the highway or road, or the work may be undertaken as a local improvement under The Local Improvement Act.

(3) A local municipality when constructing such sidewalk, improvement or service shall conform to any requirements or conditions imposed by the authority having jurisdiction and control of the highway or road, and is responsible for any injury or damage occasioned by the construction or presence of the sidewalk, improvement or service.

The above reference to construction of a roadway to a greater width or with different specifications and construction of a sidewalk other improvements would be applicable also to bicycle lanes or bicycle paths.

THE MUNICIPAL ACT

Revised Statutes of Ontario, 1970 Chapter 284

Part XIX Powers to Pass By-Laws

Section 352 Subsection 58

- (58) For prohibiting carriages, wagons, bicycles, sleighs and other vehicles and conveyances of every description, and whatever the motive power or any particular kind or class of such vehicles or conveyances being upon or being used, drawn, hauled or propelled along or upon any sidewalk, pathway or footpath, used or set apart for the use of pedestrians and forming part of any highway or bridge, boulevard, park, park-lot, garden or other place set apart for ornament or embellishment or for public recreation.
- (a) Clause (a) of paragraph 107 of subsection 1 of section 354 applies to penalties provided by a By-law passed under this paragraph.

Section 453 Subsection 4

- (4) For setting apart so much of any highway as the council may consider necessary for the purposes of a bicycle path or of a footpath.
- (a) Any person who rides or drives a horse or other beast of burden or a motor vehicle, wagon, carriage or cart over or along any such path is guilty of an offence and on summary conviction is liable to a fine not less than \$1 and not more than \$20.

Section 354 Subsection 113

- (113) Requiring all residents in the municipality owning and using any wheeled vehicle or any kind or class thereof other than a motor vehicle and a trailer as defined in The Highway Traffic Act to obtain a licence thereof before using it upon any highway of the municipality; limiting the weight or size of loads that may be carried thereon; regulating the issuing of such licences and the collection of fees therefor; fixing an annual fee not exceeding \$1 for such licences; fixing a scale of fees for different vehicles; imposing penalties not exceeding \$5 exclusive of costs upon all persons who contravene any such by-law; and providing that such penalties may be recoverable in the manner provided by this Act.

LEGISLATIVE CHANGES PROPOSED BY MUNICIPALITIES

THE HIGHWAY TRAFFIC ACT

Part IV - Garage and Storage Licenses

Section 35 and 36

One of the main purposes of the above act is to control the sale of used motor vehicle sales, repair and wrecking outlets and using those controls to limit the marketing of stolen motor vehicles.

Proposal - This legislation to be changed to include bicycle sales repair and dismantling establishments.

Comments - Bicycles are included in Section 35 and in Section 36 - Therefore, no change in the present law is required.

Part V - Equipment and Regulation 416

This part of the Highway Traffic Act specified equipment which must be carried by motor vehicles used on public roads.

Proposal - Similar legislation should be enacted for bicycles.

Comment - Section 37, Subsection 14 describes equipment such as lights and reflectors required to be carried by bicycle and tricycles after sunset - no change in the present law is required.

Section 49, Subsection 4 makes alarm bell or horn mandatory equipment for bicycle and tricycles - no change required.

Recommendations - The present legislation makes no reference to braking system requirements for bicycles. Standards have been established by Regulation 416, which at present does not include standards for bicycle, however braking standards can be added to this regulation.

Part VIII - Rate of Speed

This part of the Highway Traffic Act specifies rates of speeds on public highways in provincial parks, in public parks or exhibition grounds. No special provision is made for bicycles.

Proposal - A general maximum rate of speed should be established for all public bikeways. This rate of speed to be limited to 20 m.p.h. or as may be established by time to time.

Comment - There is no need to establish special speed limits for bicycles on public bikeways within the existing road right-of-way as the maximum posted speeds is also applicable to bicycles. To establish maximum rate of speed for off-highway bikeways is impractical, as electronic surveillance is required to catch violators. Enforcement is usually lacking and is difficult as most traffic offenders are minors.

Part IX - Rules Of The Road

Proposal - A specific chapter should be added to deal exclusively with bikeways and cyclists and their relationship with roadways, motorists, sidewalks, pedestrians and rules of the road which apply to each in their inter-relationship.

The following are specific rules of the road which have been proposed:

Left turns at intersection

Proposal - Bicycle operators intending to turn left shall accomplish the left turn at the intersecting roadway within a bikeway and if there is no bikeway, then nearest to the right hand curb line or by dismounting the bicycle and crossing as a pedestrian to the other side of the intersecting roadway and hence to the opposite side of the travelled roadway in the same manner.

Comment - At present, cyclists have three alternatives available to accomplish a left turn at intersecting roads:

- a) Make the left turn from a left turn lane or left hand lane or portion of the roadway available to traffic moving in the direction of travel; (execute the left turn in the same manner as turning motor vehicles).

- b) Make the left turn riding nearest to the right hand curb line, crossing to the other side of the intersecting roadway and again to the opposite side of the travelled roadway in the same manner; or,
- c) The safest alternative to accomplish a left turn is by dismounting the bicycle and crossing as a pedestrian.

To eliminate the first alternative as proposed is not recommended as most intersections are on two-lane residential streets with low traffic volumes where executing the left turn in the manner described by alternative (b) and (c) is impractical.

Bicycle Rules Re. Green Light

Proposal - Several proposals regarding signalized intersection and bikeways were made such as the "ride signal giving the cyclist the right-of-way or bicycle "wait" signal - cyclist facing such signal shall not cross the roadway until bicycle "ride" signal is shown.

Comment - At present there is no evidence of sufficient number of bicycles and separate bicycle facilities to warrant special considerations.

Use of Sidewalks

Proposal - Legislation should be passed by the Province giving power to municipalities to enact local by-laws designating sidewalks for joint use

by pedestrians and cyclists where pedestrian volumes are low to produce tolerable level of conflict between pedestrians and cyclists.

Comment - In special locations, little used sidewalks might be considered for use as bikeways. It could have curb ramp to allow the cyclist to cross intersections. When using sidewalks as bikeways, the cyclist should ride to the right and yield to the pedestrians.

The Municipal Act, Revised Statutes of Ontario, 1970, Chapter 284, Part XIX, Section 352, Subsection 58 gives power to municipalities to pass by-laws to prohibit the use of sidewalks by particular kind of class of vehicle. This means that the power to regulate the use of sidewalks rests with the municipalities, therefore, no change is required.

A 2.83 PEDESTRIANS AND BICYCLES PROHIBITION SIGNS

The following series of new symbol signs prohibit the access of pedestrians and bicycles to Freeways, bridges or other so designated highway sections or areas, where they are considered to constitute a hazard to themselves as well as to the motorized road user. These signs are legal under Regulations* of the Highway Traffic Act on Provincial Highways but require By-laws approval when used within municipalities. (H.T.A. Section 128, (1) (2)) and amendments thereto.

*(Ontario Regulation 434
Ontario Regulation 185/75)

A 2.83.01 Pedestrian Prohibition Sign (Rb-66)

The Pedestrian Prohibition sign shall be used on approach ramps to a Freeway, highway or bridge where the use of the facility by pedestrians is prohibited by Regulations pursuant to the Highway Traffic Act or by approved municipal By-law.

The sign shall be placed so that it is primarily visible to the pedestrian entering the prohibited area rather than the motorist on the Freeway, highway or bridge to which the prohibition applies.

Under some circumstances it may not be necessary to reflectorize the sign, but in such cases it should be so positioned that it will receive light from adjacent street lighting.

A 2.83.02 Bicycle Prohibition Sign (Rb-67)

The Bicycle Prohibition sign shall be used on approach ramps to a Freeway, highway or bridge where the use of the facility by bicycle riders is prohibited by Regulations pursuant to the Highway Traffic Act or by approved municipal By-law.

The sign shall be placed so that it is primarily visible to the bicycle rider entering the prohibited area rather than the motorist on the Freeway, highway or bridge to which the prohibition applies. The sign shall be reflectorized to show the same colour and shape by night as by day.



● Rb-66 (60x60)cm
BLANK NO. 4 & M.T.C. B-17
SUPPORT-STEEL



● Rb-67 (60x60) cm
BLANK NO. 4 & M.T.C. B-17
SUPPORT-STEEL

Rb-66
-67

**A 2.83.03 Pedestrian and Bicycle Prohibition
Sign (Rb-68)**

The combined Pedestrian and Bicycle Prohibition sign shall be used on approach ramps to a Freeway, highway or bridge where the use of the facility by pedestrians or bicycle riders is prohibited by Regulations pursuant to the Highway Traffic Act or by approved municipal By-law.

The sign shall be placed so that it is primarily visible to the pedestrian or bicycle rider entering the prohibited area rather than the motorist on the Freeway, highway or bridge to which the prohibition applies.

The sign shall be reflectorized to show the same colour and shape by night as by day.



● Rb-68 (60x60) cm
BLANK NO. 4 & M.T.C. B-17
SUPPORT-STEEL

Rb-68
69

Rb-69 (45x45) cm
BLANK NO. 3 & M.T.C. B-II



Rb-169 (60x60) cm
BLANK NO. 4 & M.T.C. B-18

Rb-69t (22.5x45) cm

5



8 Rb-169t (30x45) cm

**A 2.83.04 Bicycle Route Sign
(Rb-69, Rb-69t)**

The Rb-169 sign shall be used to advise motorists of the existence of officially designated bicycle routes along municipal roadways where bicycles and vehicular traffic are both permitted.

The Rb-69 sign may be used to indicate officially designated bicycle routes, such as pathways, that do not carry vehicular traffic. This sign will be erected to orient the bicyclist to the designated route.

The Rb-69t and Rb-169t "Bicycle Route" tab sign may be used below the permissive symbol sign for an educational period.

The Rb-69 and Rb-169 sign shall not be used on any assumed provincial highway.

This sign shall be partially reflectorized (Green Circle) to show the same colour and shape by night as by day.

FILE

G. H. Johnston
Executive Director
Planning Division

December 25, 1975

Urban Bikeways - Deputy Minister's Meeting

The meeting was held on December 5th, 1975 in the Deputy Minister's Boardroom, Queen's Park with the following in attendance:

H. F. Gilbert	-	MTC
G. H. Johnston	-	MTC
E. J. McCabe	-	MTC
H. Orlando	-	MTC
L. Steele	-	Urban Bikeways
P. Kent	-	Chairman and Solicitor
B. Bryce	-	CCM
G. Crieze	-	Raleigh Industries
Alderman A. Sparrow		
R. O'Brien	-	Etobicoke
H. Watson	-	Metro Roads
E. Mickewz	-	Park Planning Branch (MNR)

Mr. Steele tabled a letter with Mr. Gilbert which requested that the Ministry carry out:

1. A departmental review of current department policy.
2. A departmental study of costs of provincial licensing of bicycles.
3. A departmental review of urban bikeway needs with specific reference to local municipal authorities.
4. Some departmentally recommended criteria on bikeways and their accommodation on road programs.
5. Naming of an appropriate coordinating officer in the department who will act as the focal point for all contact.
6. Positive assistance in the preparation of a cycling policy action paper with the Trails Council Program.
7. Study of sources of revenue available under current powers.

Mr. Steele presented his views on what area the Ministry has not paid sufficient attention to in establishing our policy. He referred to statistics on the growth of cycling as well as statistics on fatalities. Mr. Gilbert pointed out to the group that answers would not be forthcoming today, however, he appreciated their concerns and would see that proper attention

.../2

was paid to them in future review of our policy. He further noted that fatalities had decreased over the past year, possibly as a result of the education program on cycling safety that has been sponsored by the Ministry.

Alderman Sparrow enquired about the signing policy. It was pointed out that this subject is currently under discussion between the Ministry and Mr. Bremner.

It was pointed out to the representative that even if the Ministry made bike-ways eligible for normal municipal subsidies, there was no guarantee that the municipalities would recognize them as their top priority and direct their funds to them. It was pointed out that the business of municipal priorities and the ways in which they spend their funds is left to the greatest extent possible to the municipal councils.

Mr. E. J. McCabe was appointed by the Deputy as the principle contact within the Ministry on all future issues. It was further pointed out that we would review their submission and assess the importance of this information in re-evaluating our policy. Should further meetings or follow-up be required, we will be in touch with Mr. Steele. The re-assessment of our current policy is to be carried out in light of the information brought to our attention.

G. H. Johnston
Executive Director

GHJ:cr

cc: E. J. McCabe
A. Ward



Ontario

Ministry of
Transportation and
Communications

Project Planning Branch
3rd Floor, West Tower
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

IDENTICAL ENQUIRY WAS SENT TO OTHER PROVINCES AND TO
EVERY STATE IN USA.

The Ministry of Transportation and Communications of Ontario is presently reviewing its policy regarding bicycling and bicycle facilities in the Province. In an effort to assemble data from other sources and to further our investigations, we would appreciate your assistance in supplying available data regarding bicycling programs in your State. We are particularly interested in the following items:

1. Existing or proposed policies regarding the licensing and registration of bicycles.
2. The existing funding policies related to bicycle facilities.
3. The extent of your State involvement in the planning and implementation of bicycle facilities.
4. Types of facilities which now exist, currently being constructed, or in the planning stage.
5. Monitoring information available regarding the usage of bicycle facilities.
6. The changes which have been made recently or are contemplated in the State Legislation regarding bicycles, bicycling and bicycle facilities.

.../2

7. The sort of demand that your State has encountered for involvement in bicycling facilities.
8. How stringently do you enforce the traffic laws of your State against bicyclists.

We would be grateful to receive any reports or information you may be able to supply in response to the above, together with any other experience or comments you may have regarding bicycling in your State.

Yours sincerely,

E.J. McCabe
Director

EJM:JT:rv

APPENDIX III

SUMMARY OF THE RESPONSE TO THE ENQUIRY FROM
OTHER PROVINCES REGARDING PROVINCIAL INVOLVEMENT

From the 9 provinces approached, eight responded to the enquiry.

The following is the summary of that response:

Registration

There is no provincially operated bicycle registration in Canada.

Funding

Three provinces have mandate to fund special bicycle facilities. In Manitoba Department of Highways has mandate to fund by project approval basis. In British Columbia the Ministry of Highways has mandate to fund, but has no funding policies relating specially to bicycle facilities. Also, certain funds in the Department of Recreation and Conservation could be applied to specific projects, but applications have not been made to date. In Nova Scotia individual groups may apply to the Department of Recreation for assistance to develop bicycle facilities.

Planning

British Columbia and Manitoba are involved in planning of bicycle facilities. There are few facilities in the planning stage in addition to those provided.

Construction

22 miles of bicycle lanes and a 3.2 mile bicycle path have been constructed in Manitoba. In British Columbia some paved shoulders and few bicycle pathways have been constructed.

Monitoring Information of Bicycle Usage

In Manitoba 100 to 120 cyclists per day are using the 22-mile long bicycle lane on summer weekends. Other provinces did not have monitoring information.

Legislational Changes

There have been several legislative changes regarding bicycles and bicycling in Manitoba; they are as follows:

a) New definition for bicycle, b) Prohibiting riding side by side, c) Requiring the operator to comply with signs and traffic control devices, d) Prescribing standards for bicycles which may be operating on highways and by regulating or prohibiting the sale or use of any such equipment, device, bicycle or substance that does not meet the required standards, e) Compliance with regulations - no person shall operate a bicycle upon a highway or portion thereof, at such time or times, when or where the operation of bicycles is prohibited by regulation, f) Prohibiting passengers except infants.

Demand

From the eight provinces who responded to the enquiry, six provinces reported low demand, two provinces did not respond to that question.

Enforcement of Traffic Laws

Seven provinces reported very lenient enforcement policy by the local municipalities, one province did not reply to that question.

Most provinces report having problems with the enforcement of traffic laws concerning bicyclists. The following are some typical comments:

Enforcement of traffic laws against juveniles is extremely difficult.

Lack of manpower to effectively deal with cycling traffic violations, especially juvenile offenders.

Unless a violation is serious, a cyclist would likely be given a warning rather than be charged.

The traffic laws are enforced lightly because of the fact that the majority of cyclists are juveniles.

There is a general reluctance to take action against juvenile bicyclists to go through procedures related to juvenile court. Prosecutions may cause more trouble than benefit.

SUMMARY OF THE RESPONSE TO THE ENQUIRY FROM
USA REGARDING STATES' INVOLVEMENT

From the 50 states approached, 45 responded to the enquiry.

Registration

3 states, Minnesota, Hawaii and Maryland have state administered bicycle registration. 35 states report no bicycle registration and 7 states did not answer to that question. The registration in Maryland is voluntary, in Minnesota and in Hawaii it is mandatory. All bicycles are subject to an annual registration fee of \$3.00 in Minnesota and Hawaii.

Funding

From the 45 states who responded to the enquiry, 18 state (Ohio, North Carolina, Illinois, Utah, Connecticut, Virginia, Montana, South Dakota, Delaware, New York, New Mexico, Hawaii, Iowa, Tennessee, Michigan, Maryland, Oregon and North Dakota) road jurisdictions have mandate to fund bicycling facilities, 22 states have no funding policy and 5 states did not answer to that question.

Planning

34 states are involved in planning of bicycle facilities or are co-operating with local municipalities by providing guidelines and standards. 9 states report no involvement and 2 states did not answer to that question.

Construction

16 states' transportation authorities report some involvement in providing bicycle facilities. From the 16 states, 11 states have provided only few bicycle facilities. The following 5 states have been more progressive:

Iowa 12 miles of bicycle path, 8.7 miles of bicycle lanes and
37 miles of bicycle routes provided.

Tennessee 12 miles of bicycle paths and 49 miles of bicycle routes
provided.

Maryland 21 miles of bicycle paths and 130 miles of bicycle routes
provided.

Oregon 58 miles of bicycle paths, 15 miles of bicycle lanes,
29 miles of bicycle routes and 42 miles of footpaths
provided.

Michigan 25 bicycle facilities (bicycle paths or paved shoulders)
provided.

17 states report no involvement in providing such facilities.

Monitoring Information of Usage

5 states report having some monitoring information, 17 states have none and 10 states did not respond to that question. The following is a summary of the available monitoring information:

In Oregon the average bicycle traffic on 13 bicycle facilities was 120 cyclists per day (September 1974), ranging from 9 cyclists to 279 cyclists per day.

In Maine the average bicycle traffic (summer 1973) on 4 urban streets was 156 cyclists per day, on 4 rural roads 11 cyclists per day and on 2 recreational roads 45 cyclists per day.

In Virginia the average bicycle traffic (September 1973) on 18 bicycle facilities was 133 cyclists per day.

Legislational Changes

16 states have found it necessary to make some legislative changes regarding bicycles, bicycling or bicycling facilities. 17 states have made no change and 12 states did not respond to that question.

The following are some of the legislative changes:

To allow bicycle registration

To provide curb cuts to aid cyclist and handicapped.

Requiring the use of reflectors.

To allow funding.

Improved safety standards for bicycles.

Requiring the use of reflective tires and reflective spoke covers.

Changes related to operation and night riding.

Act to provide statewide footpaths and bicycle trails.

Use bicycle paths at their own risk.

To allow planning and construction, etc.

Demand

8 states report continuing or growing demand for bicycling facilities. 18 states report low or declining demand and 19 states did not answer to that particular question.

Enforcement of Traffic Laws

19 states report the enforcement of traffic laws against cyclists, which is under local administration, is too lenient or almost non-existing and should be stricter. 4 states indicated having no problems and 25 states did not answer to that particular question or considered this as a local problem.



Ontario

Project
Planning
Branch

Ministry of
Transportation and
Communications

1201 Wilson Avenue
3rd Floor, West Tower
Downsview, Ontario

IDENTICAL COVERING LETTER AND QUESTIONNAIRE WAS
SENT TO 119 MUNICIPALITIES IN ONTARIO WITH A
POPULATION OF 5,000 AND OVER.

The Ministry of Transportation and Communications is presently reviewing its current policy regarding bicycle facilities.

In Ontario bicyclist's come under the provisions of the Highway Traffic Act and current Ministry policy permits bicycling on public highways except freeways. The Ministry recognizes bicycling as a significant form of recreation but its potential as a regular transportation mode is severely limited by its sensitivity to weather and the seasons. The potential usage of long distance bicycling facilities is quite low and there is no clear justification for provision of bicycle facilities along Provincial highways. However, recognizing that most bicycling is done in urban areas the Ministry allows the inclusion of bikeway planning as a sharable cost in urban transportation planning studies. The primary responsibility and concern of the Ministry is the safety of all users of all public highways, and particularly to users of Provincial highways. The Ministry has reinforced its safety programs particularly through the education of both bicyclists and motorists.

In order to review this policy, an assessment of the demand for bicycle facilities within Ontario will be made. The attached questionnaire has been designed to collect data from municipalities in Ontario regarding existing and planned bicycle facilities, degree of public interest in bicycling and the opinion of the municipalities regarding various aspects associated with bicycling.

Cont'd.../2

We would greatly appreciate your participation in this study by completing the attached questionnaire. Questions 1 to 7 are of particular concern to your police department, whilst the remaining questions relate to the technical or planning aspects of bicycle facilities. Should your municipality have documented reports on your proposed or existing bicycle facilities it would be appreciated if copies could be forwarded to this Ministry. If additional clarification is required please contact Mr. John Tanner, Project Planner, at Downsview 248-3571.

Because of time constraints we would appreciate the return of your questionnaire as soon as possible.

Yours sincerely,

B.J. McGaffigan
Sr. Project Planner

SURVEY OF BICYCLE FACILITIES IN ONTARIO MUNICIPALITIES

Conducted by
Ontario Ministry of Transportation and Communications
Spring, 1976

Municipality _____

1. Name and Position of Person(s) completing questionnaire _____
2. What is the total number of bicycles in your municipality? (estimate)

3. Does your municipality or police force register bicycles in any way?
(Please circle the number in the box beside the statement which best represents your answer)

NO (if no, proceed to Question 4)	1
YES (if yes, please answer Questions 3a to 3i)	2

- a) How are bicycles identified and registered?
(You may circle more than one)

Metal or plastic plate	1
Bicycle company serial number	1
Serial number inscribed on bicycle	1
By municipality or police	1
Other (please explain) _____	1

- b) What is the fee?

Adults \$ _____	1
Children \$ _____	2
No fee (go to question 3e)	3

- c) How often does a registration have to be renewed or the registration fee paid?

Every year	1
Registration remains valid as long as person owns bicycle	2
Other (please specify)	3

- d) What are the purposes of the fee? (You may circle more than one)

To cover registration costs	1
To provide bike lanes (e.g. striping)	1
To cover enforcement of bicycle registration	1
Other	1

- e) Other than to generate revenues, what are the purposes of your bicycle registration? (You may circle more than one)

To ensure mechanical safety of bicycles	1
To ensure proper safety fixtures (e.g. reflectors)	1
To ensure knowledge of rules of the road	1
To control age of bicycle users	1
To reduce occurrence of theft	1
Other (please explain) _____	1

f) Is registration mandatory?

NO	1
YES - if so, what is the penalty for non compliance? 2	

g) How does a person get a bicycle registered?
(Circle as many as appropriate)

Person must appear in person	1
Bicycle must be brought in or sales slip with serial number	1
Adult must accompany children	1
Person must pass road knowledge test	1
Mail in completed form	1
Other (specify) _____	1

h) What proportion of all bicycles in your municipality are actually registered? (Estimate)

_____ % of all bicycles in the municipality are registered

i) How many penalties or fines for unregistered bicycles were handed out in 1975? _____

4a) How many bicycles have been reported as lost or stolen in your municipality during 1975? _____ bicycles

b) How many of these bicycles were recovered? _____ bicycles

5. Is bicycle theft considered a major problem in your municipality?

NO	1
YES - if so, how is the municipality dealing with, or planning to deal with the problem 2	

6. Do you think that bicycle-vehicle accidents can be significantly reduced as long as bicycles and vehicles share the same roads?

NO	1
YES - if so, what actions have been undertaken or are contemplated by your municipality?	2

7. In the last 5 years, has bicycle usage increased significantly in your municipality?

No - Go to Question 8	1
Yes - if so, please answer questions 7a to 7e	2

- a) How significant has the increase been?

_____ % increase in ridership

- b) How much of this increase in bicycle usage do you feel is due to the provision of bike lanes, bikeways, and/or bike paths?

Do not have any of these	1
All of the increase	2
Most of the increase	3
Some of the increase	4
None of the increase	5

- c) Have any problems been encountered by your Municipality as a result of increased bicycle usage?

No - Go to Question 8	1
Yes	2

- d) What problems have been encountered?
(Circle as many as appropriate)

Increased danger to pedestrians	1
Increase in dangerous auto-bike interaction	1
Inadequate bike parking facilities	1
Bicycles parked in inappropriate places	1
Increased bike theft	1
Poorer bike riding skills	1
Increased infraction of traffic regulations	1
Others _____	1

- e) What steps have been taken or would like to be taken by your municipality to remedy these problems?

8. What provision is being made for bicycle storage such as racks or stalls in your municipality?

	<u>Who Provided</u>	<u>No. of Spaces</u>
Schools	_____	_____
Pools, recreation centres	_____	_____
Stores (on street)	_____	_____
Shopping plaza	_____	_____
Municipal buildings	_____	_____
Office buildings	_____	_____
Restaurants	_____	_____
Factories	_____	_____
Other (list)	_____	_____

9. Are bicycle racks or storage facilities planned for the future?
If so, what, where, what cost and who will provide these facilities?

Now we would like some information concerning bicycle facilities in your municipality.

10. Are bike lanes provided in your municipality on roadways that presently also carry other vehicular traffic?

No - if no continue to Question 11	1
Yes - if so - please answer Questions 10a - 10h	2

- a) How many miles? _____ miles
- b) How wide is the bike lane? _____ feet
- c) Why were these bike lanes provided? (i.e. who favoured these routes? Why?)
- _____
- _____
- d) What other traffic is permitted on these roadways?
(Circle as many as appropriate)

Cars	1
Trucks	1
Pedestrians	1
Motorbikes	1
Snowmobiles	1
Other (specify) _____	1

- e) What problems, if any, have been experienced with these bike lanes? (e.g. policing, vandalism, etc.)
- _____
- f) Did the creation of bike lanes require widening of roadways?

YES	1
NO	2

g) Who paid for these bike lanes? (i.e. the Municipality, a service group, etc.)?

h) Who pays for the yearly upkeep? _____

11. Are bike lanes being planned for your municipality for roadways that will also be carrying other vehicular traffic?

No if no, Go to Question 12	1
Yes if yes, please answer Questions 11a to 11h	2

a) How many miles are planned to be constructed in the following years?

_____ miles in 76
 _____ miles in 77
 _____ miles in 78
 _____ miles in 79
 _____ miles in 80

b) How wide will the bike lanes be? _____ feet

c) Why is such a facility being built? (i.e. who favours these routes, why?)

d) What other traffic will be permitted on the roadway?

Cars	1
Trucks	1
Pedestrians	1
Motorbikes	1
Snowmobiles	1
Other (specify) _____	1

e) What problems are anticipated (e.g. policing, vandalism, etc.)?

- f) Will the creation of bike lanes require widening of roadways?

Yes	1
No	2

- g) Who will pay for these bike lanes? (i.e. the municipality, a service group)

- h) Who will pay for the yearly upkeep?

12. Do you have designated bikeways that do not ordinarily permit automobile and truck traffic?

No (if no continue to Question 13)	1
Yes - if so, please answer Questions 12a -12h	2

- a) How many miles? _____ miles

- b) How wide is the bikeway? _____ feet

- c) Are bikeways illuminated for night time use?

Yes	1
No	2

- d) Why were these bikeways constructed? (i.e. who favoured these routes? why?)

- e) What other uses are permitted on these bikeways? (You may check more than one)

Emergency vehicles	1
Pedestrians	1
Motorbikes	1
Snowmobiles	1
Other (specify) _____	1

- f) What problems if any, have been experienced with these bikeways? (e.g. policing, vandalism, etc.)

- g) Who paid for these bikeways? (i.e. the municipality, a service group)
-

- h) Who pays for the yearly upkeep?
-

13. Are bikeways planned within your municipality that will not permit automobile and truck traffic?

No - if no, continue to Question 14	1
Yes if so, please answer Question 13a to 13h	2

- a) How many miles are planned in each of the following years?

1976 _____ miles

1977 _____ miles

1978 _____ miles

1979 _____ miles

1980 _____ miles

- b) What is the proposed width of the facility? _____ feet

- c) Will the bikeways be illuminated for night time use?

No	1
Yes	2

- d) Why is such a facility being built? (i.e. who favours these routes, why?)
-
-

- e) What other uses will be permitted on the bikeways? (You may circle more than one)

Emergency Vehicles	1
Pedestrians	1
Motorbikes	1
Snowmobiles	1
Other (specify) _____	1

- f) What problems are anticipated? (e.g. policing, vandalism, etc.)
-
-

g) Who will pay for these bikeways? (i.e., the municipality, a service group?)

h) Who will pay for the yearly upkeep?

14. If no changes are made in your present bicycle facilities then will bicycle usage increase significantly in your municipality in the next 3 years?

No	1
Yes - if so	2
How significant will the increase be?	
____ % ridership increase expected	

15. If bikeways, bike lanes and bicycle racks were provided then would bicycle usage increase significantly in your municipality in the next 3 years?

No	1
Yes - if so	2
How significant will the increase be?	
____ % ridership increase expected	

16. What, in your opinions, should be the government's role regarding bicycle facilities?
-
-
-

17. Do you have any further comments regarding bicycle usage, bikeways or bicycle facilities in your municipality? (e.g. satisfaction of bicyclists and motorists with facilities)
-
-
-
-

18. If you have any bike lanes or bikeways could you please send us copies of the signs used to identify them as well as copies of any reports on your bicycle facilities?

SUMMARY OF THE RESPONSE TO THE
MUNICIPAL QUESTIONNAIRE

The questionnaire was sent to 119 municipalities in Ontario, with a population of 5000 and over. From the 119 municipalities contacted, 60 municipalities or 50 percent responded to the questionnaire.

From the 60 municipalities who responded to the survey, 33 municipalities report having mandatory bicycle registration, 10 voluntary and 17 no registration.

Table V shows the population, the number of bicycles (estimated), the percentage of bicycles registered, the number and the percentage of bicycles stolen, the number and the percentage of bicycles recovered for 37 municipalities,* and broken down by municipalities with mandatory, voluntary and with no bicycle registration and the totals for the three categories.

The 37 municipalities have a total population of 3,596,000. This constitutes 44 percent of the Ontario population. The following is a summary of the data regarding bicycle registration and bicycle theft for the 37 municipalities.

Number of bicycles (estimated)	1,085,000
.Bicycles per person	.30
(Bicycles per person by Metro Toronto Telephone Survey)	.28

* 37 municipalities were selected because they qualified by answering to all of the questions required.

Bicycles stolen in 1975 (2.15 %)	23,500
Bicycles recovered in 1975 (37.4 %)	8,800
Bicycles stolen and not recovered in 1975	14,700

The above percentages applied for Ontario population of 8,200,000 -

We have:

Number of bicycles in Ontario	2,460,000
Bicycles stolen	53,000
Bicycles recovered	20,000
Bicycles stolen and not recovered	33,000

Municipalities with mandatory bicycle registration can impose penalties (established by municipal by-laws) for non-compliance. Most municipalities charge a standard fine of \$5.00 for unregistered bicycles, but no fines were handed out in 1975.

In response to the question if bicycle theft is considered a major problem, 46 percent of the municipalities consider it a problem while the remaining 54 percent have the opposite view.

38 municipalities charge fees for bicycle registration. The following is most common fees charged:

\$.50 per year by 15 percent of the municipalities

\$1.00 per year by 27 percent

\$1.00 per life of the bike by 21 percent

\$1.50 per life of the bike by 15 percent

\$2.00 per life of the bike by 8 percent

The purpose of the fee by 95 percent of the municipalities is to cover registration cost or to cover enforcement of bicycle registration.

The purpose of bicycle registration is reported as follows:

To reduce occurrence of theft by 43 percent of the municipalities

To ensure mechanical safety of bicycles by 28 percent

To ensure proper safety fixtures (e.g., reflectors) by 26 percent

To ensure knowledge of rules of the road by 26 percent

Other reasons by 4 percent

In answer to the above question, more than one reason could be stated.

In response to the question, can bicycle-vehicle accidents be significantly reduced as long as bicycles and motor vehicles share the same roads, the opinion was equally divided.

In response to the question, what should be the government's role regarding bicycle facilities, 22 municipalities requested cost sharing, 9 requested planning and design guidelines and standard signing, 3 requested improved safety education programs, 3 requested Provincial registration or licensing, 3 requested improved legislation to regulate bicycles and bikeways.

Further to the above, one request was made for the following:

To support courts re: enforcement of traffic laws

Laws for juvenile prosecution

Special section in the Highway Traffic Act for bicycle use

Prohibit bicycles from all main highways

Regulate mechanical safety features

Reflectors on pedals and axles

Legislation to use shoulders as bikeways

TABLE V

BICYCLE REGISTRATION AND BICYCLE THEFT STATISTICS

FROM 37 MUNICIPALITIES IN ONTARIO

Type of Registration	Number of Municipalities	Population	Number of Bicycles	% Registered	Bicycles Stolen Number	%	Bicycles Recovered Number	%	Bicycles Stolen and not recovered
Mandatory	21	520,000	127,000	65%	5,285	4.2%	2,994	57%	2,291
Voluntary	7	2,908,000	912,000	40%	17,094	1.9%	5,394	32%	11,700
No Registration	9	165,000	47,500		1,128	2.4%	416	37%	714
TOTAL	37	3,543,000	1,085,000		23,500	2.2%	8,800	37.5%	14,700

From the 60 municipalities who responded to the survey 17 municipalities reported having some bicycle facilities. The following is the list of the municipalities and the number of miles of various facilities in existence at that time.

Guelph	-	2.25 miles of bicycle lanes; 0.25 miles of bicycle paths and 1.2 miles of bicycle routes.
Thunder Bay	-	1.2 miles of bicycle paths.
Grimsby	-	1.5 miles of bicycle paths.
Windsor	-	5.0 miles of bicycle paths.
Kitchener	-	0.25 miles of bicycle routes. 6.0 miles of paths.
Waterloo	-	2.0 miles of bicycle paths.
Peterborough	-	1.0 miles of bicycle paths.
Cambridge	-	8.5 miles of bicycle routes; 5.0 miles of bicycle paths.
Brantford	-	1.5 miles of bicycle paths.
Brampton	-	25 miles of bicycle paths.
Sudbury	-	12.0 miles of bicycle routes; 0.8 miles of bicycle paths.
Owen Sound	-	2.0 miles of bicycle paths.
Ancaster	-	1.0 miles of bicycle paths. 8.0 miles of combination of bicycle and foot paths.
Hamilton	-	0.5 miles of bicycle paths.
Niagara-On-The-Lake	-	5.5 miles of bicycle paths constructed by Regional Government of Niagara.
Ottawa	-	40 miles of bicycle paths constructed by National Capital Commission.
Metro Toronto	-	35 miles of bicycle paths and 15 miles of bicycle routes.

It should be noted that the above list may not include all bicycle facilities for Ontario as 50 percent of the 119 municipalities contacted did not respond to that survey.

